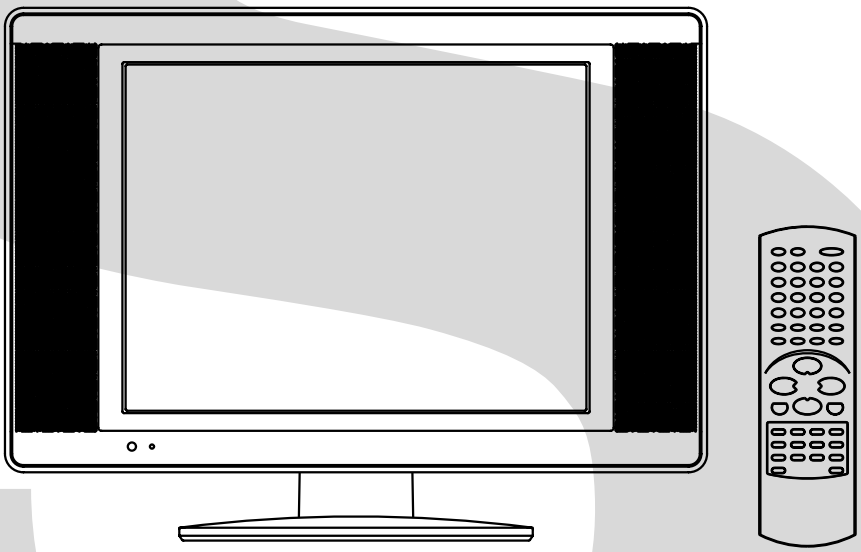
TOSHIBA

FILE NO. 810-200514

SERVICE MANUAL

14-inch LCD TV/DVD COMBINATION

14DLV75



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Printed in Thailand

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14-inch* Diagonal LCD TV/DVD COMBINATION

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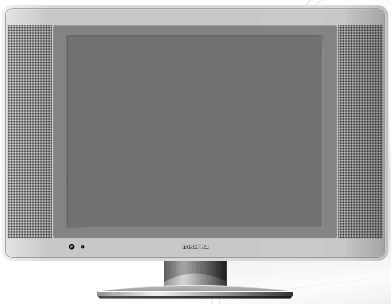
14DLV75

OWNER'S MANUAL



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Before operating the unit, please read this manual thoroughly.
*Screen size is approximate.

IMPORTANT SAFEGUARDS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION : TO PREVENT ELECTRIC SHOCK DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

FCC NOTICE :
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance with the FCC (Federal Communications Commission) Rules could void the user's authority to operate this equipment.

WARNING: Handling the cord on this product or cords associated with accessories sold with this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling.***

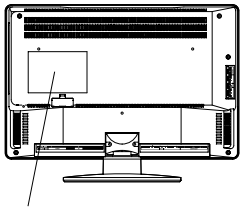
CAUTION:
THIS DIGITAL VIDEO PLAYER EMPLOYS A LASER SYSTEM.

TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS OWNER'S MANUAL CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT AN AUTHORIZED SERVICE LOCATION.

USE OF CONTROLS, ADJUSTMENTS OR THE PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

TO PREVENT DIRECT EXPOSURE TO LASER BEAM, DO NOT TRY TO OPEN THE ENCLOSURE. VISIBLE LASER RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. DO NOT STARE INTO BEAM.

Location of the required Marking
The rating sheet and the safety caution are on the rear of the unit.



CERTIFICATION: COMPLIES WITH FDA RADIATION PERFORMANCE STANDARDS, 21 CFR SUBCHAPTER J.

IMPORTANT SAFEGUARDS

1. **READ INSTRUCTIONS**
   All the safety and operating instructions should be read before the unit is operated.
2. **RETAIN INSTRUCTIONS**
   The safety and operating instructions should be retained for future reference.
3. **HEED WARNINGS**
   All warnings on the unit and in the operating instructions should be adhered to.
4. **FOLLOW INSTRUCTIONS**
   All operating and use instructions should be followed.
5. **CLEANING**
   Unplug this unit from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a soft dry cloth for cleaning the exterior cabinet only.
6. **ATTACHMENTS**
   The manufacturer of this unit does not make any recommendations for attachments, as they may cause hazards.
7. **WATER AND MOISTURE**
   Do not use this unit near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.
8. **ACCESSORIES**
   Do not place this unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury, and serious damage to the unit.

PORTABLE CART WARNING
(symbol provided by RETAC)

S3126A

8A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

9. **VENTILATION**
   Slots and openings in the cabinet back or bottom are provided for ventilation, and to ensure reliable operation of the unit, and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the unit on a bed, sofa, rug, or other similar surface. This unit should never be placed near or over a radiator or heat source. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. **POWER SOURCE**
    This unit should be operated only from the type of power source indicated on the rating plate. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company.
11. **GROUNDING OR POLARIZATION**
    This unit is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. Do not defeat the safety purpose of the grounding-type plug.
12. **POWER-CORD PROTECTION**
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

IMPORTANT SAFEGUARDS (continued)

13. LIGHTNING
To protect your unit from a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the unit due to lightning and power line surges. However, if there is thunder or lightning now, do not touch the unit and any connected cable.
This will for you not to receive the electric shock by the serge of thunder.

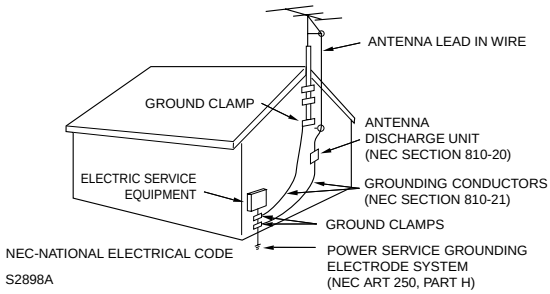
14. POWER LINES
An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall onto or against such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.

15. OVERLOADING
Do not overload wall outlets and extension cords, as this can result in a risk of fire or electric shock.

16. OBJECT AND LIQUID ENTRY
Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.

17. OUTDOOR ANTENNA GROUNDING
If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code (NEC), ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING AS PER THE NATIONAL ELECTRICAL CODE



18. SERVICING
Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
For example:
a. When the power-supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the unit.
c. If the unit has been exposed to rain or water.
d. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
e. If the unit has been dropped or the cabinet has been damaged.
f. When the unit exhibits a distinct change in performance, this indicates a need for service.

19. REPLACEMENT PARTS
When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part.
Unauthorized substitutions may result in fire, electric shock or other hazards.

20. SAFETY CHECK
Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

21. HEAT
The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

22. DISC SLOT
Keep your fingers well clear of the disc slot as it is closing. It may cause serious personal injury.

23. CONNECTING
When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause a product damage. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.

24. HEADPHONES
When you use the headphones, keep the volume at a moderate level. If you use the headphones continuously with high volume sound, it may cause hearing damage.

25. LASER BEAM
Do not look into the opening of the disc slot or ventilation opening of the product to see the source of the laser beam. It may cause sight damage.

26. DISC
Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.

27. LCD
Do not press hard or jolt the LCD panel. It may cause the LCD panel glass to break and injury may occur. Should the LCD panel be broken and liquid leaks out, do not inhale or swallow it. Doing so may cause poisoning. If you have got it into your mouth, wash it out and consult your doctor. If your hands or clothes have touched it, wipe them with alcohol and a cleaning cloth and then wash them well.

28. NOTE TO CABLE TV SYSTEM INSTALLER
This reminder is provided to call the Cable TV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

ON DISPOSAL

This product contains mercury. Disposal of mercury may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industrial Alliance : www.eiae.org.

Precautions

Notes on handling

- Do not shock the LCD panel. It may cause unit damage and malfunction.
- When shipping the unit, the original shipping carton and packing materials come in handy. For maximum protection, repack the unit as it was originally packed at the factory.
- Do not use volatile liquids, such as insect spray, near the unit. Do not leave rubber or plastic products to contact the unit for prolonged period. They will leave marks on the finish.
- The top and rear panels of the unit may become warm after a long period of use. This is not a malfunction.
- When the unit is not in use, be sure to remove the disc and turn off the power.
- If you do not use the unit for a long period, the unit may not function properly in the future. Turn on and use the unit occasionally.

Notes on locating

- Place the unit on a level surface. Do not use it on a shaky or unstable surface such as a wobbling table or inclined stand. The loaded disc may become disaligned and damage the unit.
- When you place this unit near a TV, radio, or VCR, the playback picture may become poor and the sound may be distorted. In this case, place the unit away from the TV, radio, or VCR.
- To avoid damage to this product, never place or store the unit in direct sunlight; hot, humid areas; or areas subject to excessive dust or vibration.

Notes on cleaning

Use a soft, dry cloth for cleaning.
- Do not use any type of solvent, such as thinner and benzine, as they may damage the surface of the unit.
- If you use a chemical saturated cloth to clean the unit, follow that product's instructions.

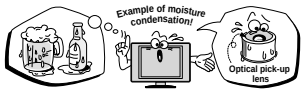
Notes on LCD

- The color LCD is manufactured using extremely high precision technology, but even so may include certain pixels that do not operate properly (that do not light, that remain lit constantly, etc.). We do our best to keep the number of these defective pixels to a minimum, but please understand that they cannot be completely eliminated even with the most advanced manufacturing technologies available today.
- The fluorescent tube which illuminates the panel from the inside will deteriorate with use. When the LCD becomes dim, flickers, or does not illuminate, contact your dealer for replacement.
- The brightness of the LCD monitor differs slightly depending on the viewing angles. Adjust the angle to obtain the best viewing. (The recommended angle is 90 degrees to the monitor.)

Notes on moisture condensation

Moisture condensation damages the unit. Please read the following carefully.

Moisture condensation occurs, for example, when you pour a cold drink into a glass on a warm day. Drops of water form on the outside of the glass. In the same way, moisture may condense on the optical pick-up lens inside this unit, one of the most crucial internal parts of the unit.

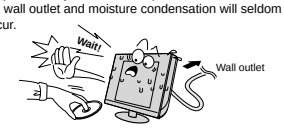


■ Moisture condensation occurs during the following cases.

- When you bring the unit directly from a cold place to a warm place.
- When you use the unit in a room where you just turned on the heater, or a place where the cold wind from the air conditioner directly hits the unit.
- In summer, when you use the unit in a hot and humid place just after you move the unit from an air conditioned room.
- When you use the unit in a humid place.

■ Do not use the unit when moisture condensation may occur.

If you use the unit in such a situation, it may damage discs and internal parts. Remove the disc, connect the power cord of the unit to the wall outlet, turn on the unit, and leave it for two or three hours. After two or three hours, the unit will have warmed up and evaporated any moisture. Keep the unit connected to the wall outlet and moisture condensation will seldom occur.

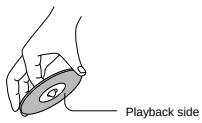


Notes on discs

On handling discs

- Do not touch the playback side of the disc.
For example, handle the disc so that it is shown in figure below.

DO



- Do not attach paper or tape to discs.

DO NOT

On cleaning discs

- Fingerprints and dust on the disc cause picture and sound deterioration. Wipe the disc from the center outwards with a soft cloth. Always keep the disc clean.

DO

DO NOT

- Do not use any type of solvent such as thinner, benzine, commercially available cleaners or antistatic spray for vinyl LPs. It may damage the disc.

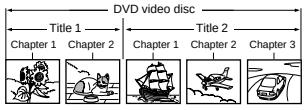
On storing discs

- Do not store discs in a place subject to direct sunlight or near heat sources.
- Do not store discs in places subject to moisture and dust such as a bathroom or near a humidifier.
- Store discs vertically in a case. Stacking or placing objects on discs outside of their case may cause warping.

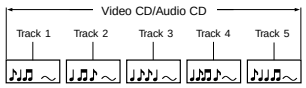
Structure of disc contents

Normally, DVD video discs are divided into titles, and the titles are sub-divided into chapters. Video CDs and Audio CDs are divided into tracks.

DVD video disc



Video CD/Audio CD



Each title, chapter or track is assigned a number, which is called "title number", "chapter number" or "track number" respectively.
There may be discs that do not have these numbers.

Notes on copyright

The unauthorized recording, use, distribution, or revision of copyrighted materials including, without limitation, television programs, videotapes, and DVDs, is prohibited under the Copyright Laws of the United States and other countries, and may subject you to civil and criminal liability.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Notes on discs (continued)

About this owner's manual

This owner's manual explains the basic instructions of this unit. Some DVD video discs are produced in a manner that allows specific or limited operation during playback. As such, the unit may not respond to all operating commands. This is not a defect in the unit. Refer to instruction notes of discs.

"🖐" may appear on the TV screen during operation. A "🖐" means that the operation is not permitted by the unit or the disc.
For example, sometimes it is unable to stop the playback of copyright message of the disc when the STOP (■) button is pressed. Alternatively, the "🖐" may also indicate that the feature is not available for the disc.

Notes on region numbers

The region number of this unit is 1. If region numbers, which stand for their playable area, are printed on your DVD video disc and you do not find (ALL) or (1), disc playback will not be allowed by the player. (In this case, the unit will display a message on-screen.)
Some DVDs that have no region code label may still be subject to area restrictions and therefore not playable.

On Video CDs

This DVD supports Video CDs equipped with the PBC (Version 2.0) function. (PBC is the abbreviation of Playback Control.) You can enjoy two playback variations depending on types of discs.

- **Video CD not equipped with PBC function (Version 1.1)**
  Sound and movie can be played on this DVD in the same way as an audio CD.
- **Video CD equipped with PBC function (Version 2.0)**
  In addition to operation of a Video CD not equipped with the PBC function, you can enjoy playback of interactive software with search function by using the menu displayed on the TV screen (Menu Playback). Some of the functions described in this owner's manual may not work with some discs.

Playable discs

This unit can play the following discs.

	Disc Mark	Contents	Disc Size	Maximum playback time
DVD video discs	DVD VIDEO / DVD VIDEO	Audio + Video (moving pictures)	12 cm	Approx. 4 hours (single sided disc)
				Approx. 8 hours (double sided disc)
			8 cm	Approx. 80 minutes (single sided disc)
				Approx. 160 minutes (double sided disc)
Video CDs	COMPACT disc DIGITAL VIDEO	Audio + Video (moving pictures)	12 cm	Approx. 74 minutes
			8 cm	Approx. 20 minutes
Audio CDs	COMPACT disc DIGITAL AUDIO	Audio	12 cm	Approx. 74 minutes
			8 cm (CD single)	Approx. 20 minutes

The following discs are also available.
- DVD-R/RW discs of DVD video format
- CD-R/CD-RW discs of CD-DA, Video CD, MP3, WMA or JPEG format
- Kodak Picture CD and FUJICOLOR CD format

Some of these discs may be incompatible.

- When you play an 8 cm disc, you need the adapter (not supplied).
- You cannot play discs other than those listed above.
- You cannot play discs of DVD-RAM, DVD-ROM, Photo CD, etc., or non standardized discs even if they may be labeled as above.
- Some CD-R/RWs cannot be played back depending on the recording conditions.
- This unit uses the NTSC color system, and cannot play DVD video discs recorded in any other color system (PAL, SECAM, etc.).

Because of problems and errors that can occur during the creation of DVD software and/or the manufacture of DVD discs, Toshiba cannot guarantee that the DVD player contained in the unit will play every feature of every DVD bearing the DVD logo. As one of the creators of DVD technology, Toshiba DVD players are manufactured using the highest standards of quality, and as a result, such incompatibilities are rare. If you happen to experience any difficulty playing a DVD in this unit, please feel free to call our Call Center (see page 53).

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Identification of controls

See the page in ▭ for details.

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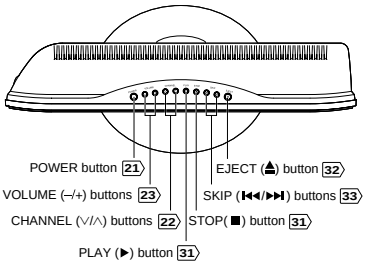
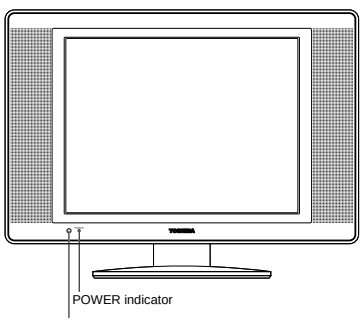
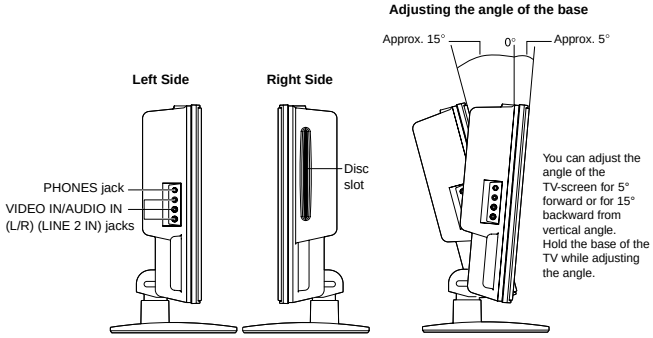


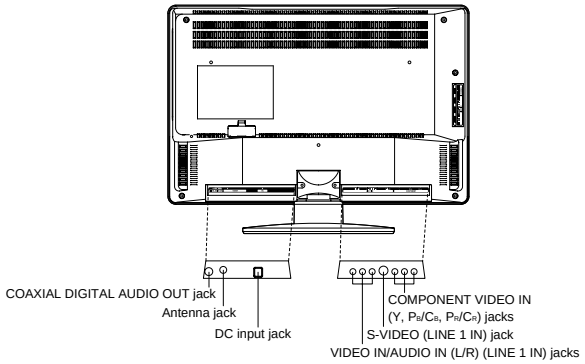
Front



Side



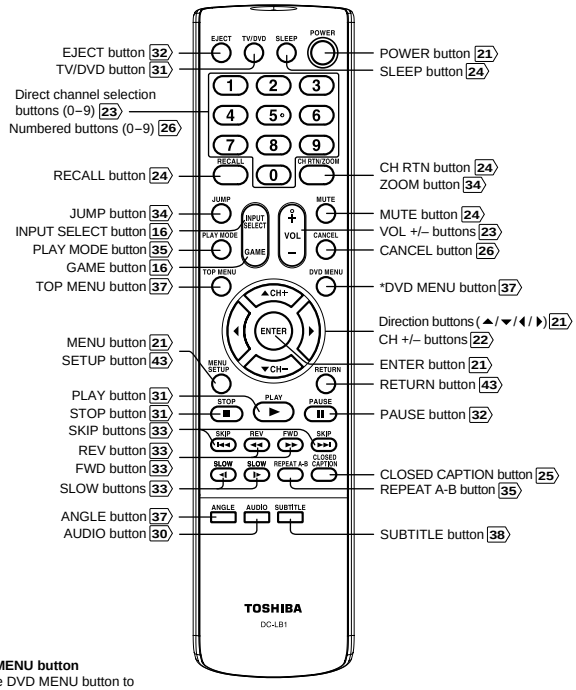
Rear



Identification of controls (continued)

Remote control

The instructions in this manual describe the function on the remote control. See the page in ⬭ for details.



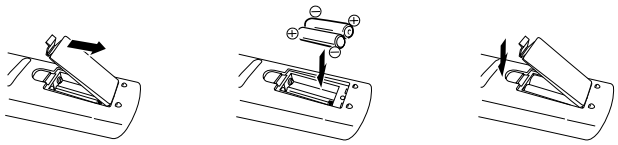
***DVD MENU button**
Use the DVD MENU button to display the menu included on many DVD video discs.
To operate a menu, follow the instructions in "DVD menu." 37

Inserting batteries

1 Open the battery compartment cover in the direction of the arrow.

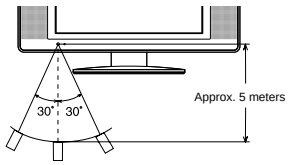
2 Install two "R03/AAA" batteries (supplied), paying attention to the polarity indicated in the battery compartment.

3 Replace the compartment cover.



Operation

- Aim the remote control at the remote sensor and press control buttons to operate.
- Operate the remote control within 30° angle on either side of the remote sensor, up to a distance of approx. 5 meters.



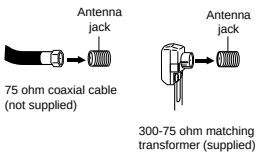
Caution:
- Never throw batteries into a fire.

Notes:
- Be sure to use AAA size batteries.
- Dispose of batteries in a designated disposal area.
- Attention should be drawn to the environmental aspects of battery disposal.
- Do not mix different battery types or combine used batteries with new ones.
- If the remote control does not operate correctly, or if the operating range becomes reduced, replace both batteries with new ones.
- If the batteries are dead or if you will not be using the remote control for a long time, remove the batteries to prevent battery acid from leaking into the battery compartment.

Antenna connections

If you are using an indoor or outdoor antenna, follow the instructions below that correspond to your antenna system. If you are using a cable TV service (CABLE), see page 15 for Cable TV connections.

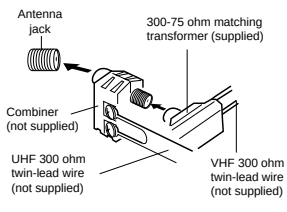
Combination VHF/UHF antenna (Single 75 ohm cable or 300 ohm twin-lead wire)



Connect the 75 ohm cable from the combination VHF/UHF antenna to the antenna jack on the back of the TV/DVD.

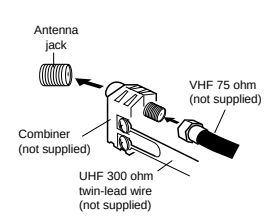
If your combination VHF/UHF antenna has a 300 ohm twin-lead wire, use the 300-75 ohm matching transformer.

Combination VHF/UHF antenna (Separate VHF and UHF 300 ohm twin-lead wires)



Connect the UHF 300 ohm twin-lead wire to the combiner (not supplied). Connect the VHF 300 ohm twin-lead wire to the 300-75 ohm matching transformer. Attach the transformer to the combiner, then attach the combiner to the antenna jack on the back of the TV/DVD.

Separate VHF/UHF antennas (75 ohm VHF cable and 300 ohm UHF twin-lead wires)

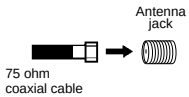


Connect the VHF 75 ohm cable and UHF 300 ohm twin-lead wire to the combiner (not supplied). Attach the combiner to the antenna jack on the back of the TV/DVD.

Cable TV connections

This TV/DVD has an extended tuning range and can tune most cable channels without using a Cable TV converter box. Some cable companies offer "premium pay channels" in which the signal is scrambled. Descrambling these signals for normal viewing requires the use of a descrambler device which is generally provided by the cable company.

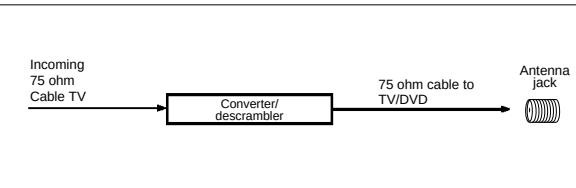
For subscribers to basic cable TV service



For basic cable service not requiring a converter/descrambler box, connect the Cable TV 75 ohm coaxial cable directly to the Antenna jack on the back of the TV/DVD.

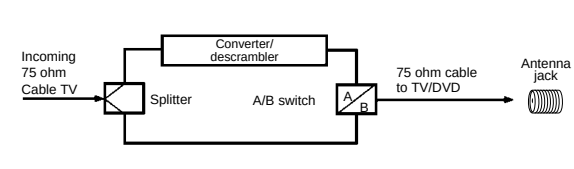
For subscribers to scrambled cable TV service

If you subscribe to a cable TV service which requires the use of a converter/descrambler box, connect the incoming 75 ohm coaxial cable to the converter/descrambler box. Using another 75 ohm coaxial cable, connect the output jack of the converter/descrambler box to the antenna jack on the TV/DVD. Follow the connections shown below. Set the TV/DVD to the output channel of the converter/descrambler box (usually channel 3 or 4) and use the converter/descrambler box to select channels.



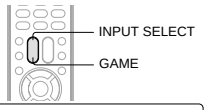
For subscribers to unscrambled basic cable TV service with scrambled premium channels

If you subscribe to a cable TV service in which basic channels are unscrambled and premium channels require the use of a converter/descrambler box, you may wish to use a signal splitter and an A/B Switch box (available from the cable company or an electronics supply store). Follow the connections shown below. With the switch in the "B" position, you can directly tune any nonscrambled channels on your TV/DVD. With the switch in the "A" position, tune your TV/DVD to the output of the converter/descrambler box (usually channel 3 or 4) and use the converter/descrambler box to tune scrambled channels.



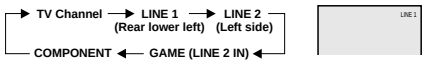
Connecting to optional equipment

You can enjoy VCR, camcorder or TV game with connection to external input.



Using the audio/video inputs

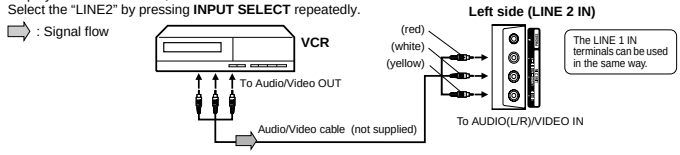
Press **INPUT SELECT** repeatedly to select the desired mode.
"LINE1", "LINE2", "GAME", "COMPONENT" or TV channel will display on the screen for 4 seconds.



Note: In the DVD mode this key will not operate.

Connecting to a VCR

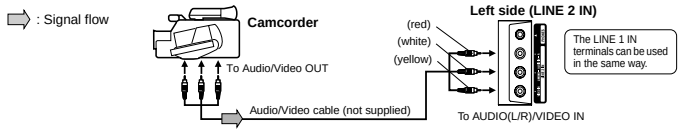
To playback from the VCR, connect the VCR to the TV/DVD as shown.
Select the "LINE2" by pressing **INPUT SELECT** repeatedly.



Note: Picture might be muted for some VCR playback. This is not a malfunction of this unit.

Connecting to a camcorder

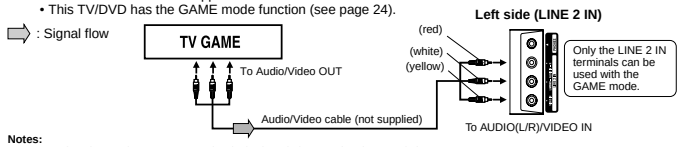
To playback from the camcorder, connect the camcorder to the TV/DVD as shown.
Select the "LINE2" by pressing **INPUT SELECT** repeatedly.



Connecting to a TV Game

You can enjoy playing a TV game on the screen by adjusting to suitable brightness for your eyes.

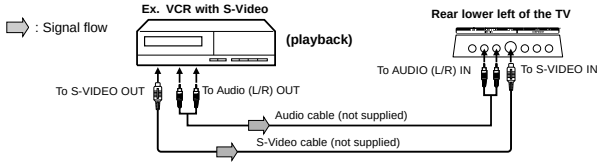
1. Connect a TV Game to the TV/DVD.
2. Select the "GAME" by pressing **INPUT SELECT** repeatedly or simply press **GAME**.
   The GAME mode screen appears.
   • This TV/DVD has the GAME mode function (see page 24).



Notes:
- You can also change the TV screen to the desired mode by pressing the CH +/– buttons.
- The TV/DVD can also be used as a display device for many video games. However, due to the wide variety of different types of signal generated by these devices and subsequent hook-up variations required, they have not all been included in the suggested connection diagrams. You'll need to consult each component's Owner's Manual for additional information.
- Interactive video games that involve shooting a "gun" type of joystick at on-screen target may not work on this TV/DVD.

Connecting to an optional equipment with S-video output

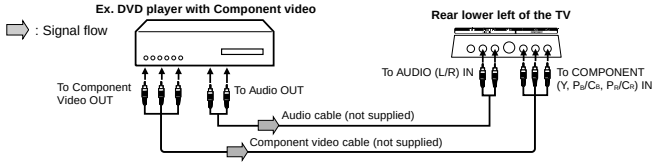
If you connect a VCR with an S-VIDEO cable to the S-VIDEO IN jack on the rear lower left of the TV/DVD, you must also connect the audio cables to the AUDIO IN jacks on the rear lower left of the TV/DVD (LINE 1 IN). The S-VIDEO cable only carries the video signal. The audio signal is separate.
Select the "LINE1" by pressing **INPUT SELECT** repeatedly.



Note: When the S-VIDEO cable and the standard video cable are connected at the same time, the S-video cable takes precedence.

Connecting an optional equipment with ColorStream® (Component video) output

Your TV/DVD is capable of using ColorStream® (component video). Connecting your TV/DVD to a component video compatible DVD player, such as a Toshiba DVD player with ColorStream® can greatly enhance picture quality and performance.



■ **Selecting Component input mode**
Press **INPUT SELECT** repeatedly to select "COMPONENT" mode.

When using the Component video cable, an Audio cable must be connected to AUDIO IN (L/R) (LINE 1 IN) jacks.

The ColorStream® inputs on this unit are for use with devices that output 480i interlaced signals and 480p progressive signals. This unit will not accept or display 720p progressive scan signals or 1080i interlaced high-definition signals. If you connect a high-definition set-top receiver, 720p progressive scan DVD player, or other similar device to the unit's ColorStream® inputs, YOU MUST SWITCH THE DEVICE'S OUTPUT TO 480i INTERLACED OR 480p PROGRESSIVE MODE FIRST. Failure to do this will cause a poor or no picture to display.

Notes:
- Refer to the owner's manual of the connected equipment as well.
- When you connect the unit to other equipment, be sure to turn off the power and unplug all of the equipment from the wall outlet before making any connections.
- If you place the unit near a tuner or radio, the radio broadcast sound might be distorted. In this case, place the unit away from the tuner and radio.

Connecting to optional equipment (continued)

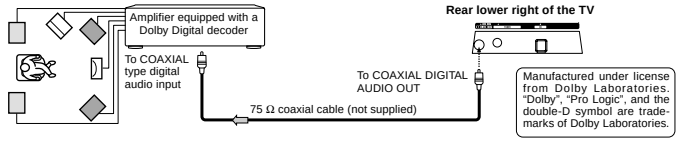
You can enjoy high quality dynamic sounds by connecting the TV/DVD to optional audio equipment.

* This section uses the following reference mark.

: Front speaker
: Rear speaker
: Sub woofer
: Center speaker
: Signal flow

Connecting to an amplifier equipped with a Dolby Digital decoder

Dolby Digital
Dolby Digital is the surround sound technology used in theaters showing the latest movies, and is now available to reproduce this realistic effect in the home. You can enjoy motion picture and live concert DVD video discs encoded via the Dolby Digital recording system with this dynamic realistic sound by connecting the TV/DVD to a 6 channel amplifier equipped with a Dolby Digital decoder or Dolby Digital processor. If you have a Dolby Surround Pro Logic decoder, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1-channel Dolby Digital soundtracks, as well as from titles with the Dolby Surround mark.

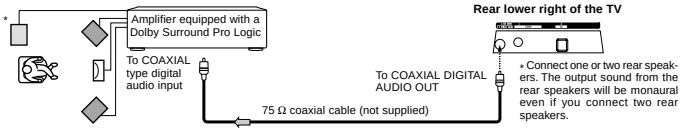


Connecting to an amplifier equipped with a Dolby Surround Pro Logic

Dolby Surround Pro Logic
You can enjoy the dynamic realistic sound of Dolby Surround Pro Logic by connecting an amplifier and speaker system (right and left front speakers, a center speaker, and one or two rear speakers).

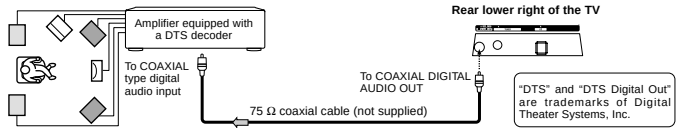
■ With an amplifier equipped with a Dolby Digital
Connect the equipment the same way as described in "Connecting to an amplifier equipped with a Dolby Digital decoder." Refer to that amplifier's owner's manual and set the amplifier so you can enjoy Dolby Surround Pro Logic sound.

■ With an amplifier not equipped with a Dolby Digital
Connect the equipment as follows.
• This connection is only suitable for Video CDs and Audio CDs.



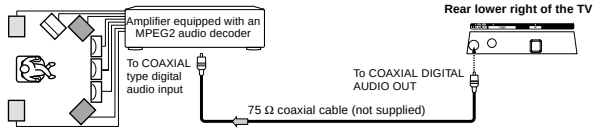
Connecting to an amplifier equipped with a DTS decoder

Digital Theater Systems (DTS)
DTS is a high quality surround technology used in theaters and now available for home use, on DVD video discs or audio CDs. If you have a DTS decoder or processor, you can obtain the full benefit of 5.1 channel DTS encoded sound tracks on DVD video discs or audio CDs.



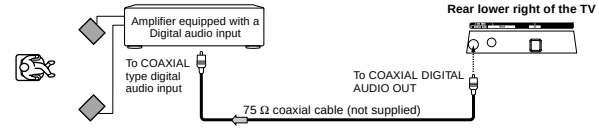
Connecting to an amplifier equipped with an MPEG audio decoder

MPEG2 sound
You can enjoy motion picture and live concert DVD video discs encoded via the MPEG2 recording system with dynamic realistic sound by connecting an amplifier equipped with an MPEG2 audio decoder or MPEG2 audio processor.



Connecting to an amplifier equipped with a digital audio input

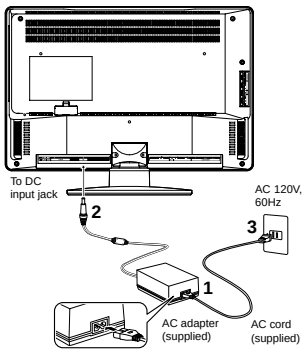
2 channel digital stereo
You can enjoy the dynamic sound of 2 channel digital stereo by connecting an amplifier equipped with a digital audio input and speaker system (right and left front speakers).
Note: PCM audio is limited to DVD or CD playback.



Notes:
- DO NOT connect the COAXIAL DIGITAL AUDIO OUT jack of the TV/DVD to the AC-3 RF input of a Dolby Digital Receiver. This input on your A/V Receiver is reserved for Laserdisc use only and is incompatible with the COAXIAL DIGITAL AUDIO OUT jack of the TV/DVD.
- Connect the COAXIAL DIGITAL AUDIO OUT jack of the TV/DVD to the "COAXIAL" input of a Receiver or Processor.
- Refer to the owner's manual of the connected equipment as well.
- When you connect the TV/DVD to other equipment, be sure to turn off the power and unplug all of the equipment from the wall outlet before making any connections.
- The output sound of the TV/DVD has a wide dynamic range. Be sure to adjust the receiver's volume to a moderate listening level. Otherwise, the speakers and your hearing may be damaged by a sudden high volume sound.
- Turn off the amplifier before you connect or disconnect the TV/DVD's power cord. If you leave the amplifier power on, the speakers may be damaged.

Power source

Power connection



TO USE AC POWER
1. Connect the AC cord to the AC adapter.
2. Connect the AC adapter plug into the TV/DVD's DC input jack.
3. Connect the AC cord into a wall outlet.

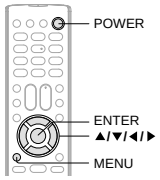
Notes:
- Make sure to insert the plug of each cord securely.
- During use the AC adapter becomes warm. This is not a malfunction.

WARNING:
- DO NOT CONNECT THIS UNIT TO THE POWER USING ANY DEVICE OTHER THAN THE SUPPLIED AC ADAPTER OR POWER CORD. THIS COULD CAUSE FIRE, ELECTRIC SHOCK, OR DAMAGE.
- DO NOT USE WITH A VOLTAGE OTHER THAN THE POWER VOLTAGE DISPLAYED. THIS COULD CAUSE FIRE, ELECTRIC SHOCK, OR DAMAGE.

CAUTION:
- DO NOT USE THE AC ADAPTER IF IT IS COVERED BY A CLOTH ETC., OR PRESSED INTO A NARROW AREA. THIS RESULTS IN POOR DISSIPATION OF HEAT AND MAY CAUSE FIRE, ELECTRIC SHOCK, OR DAMAGE.
- WHEN THIS UNIT IS NOT USED FOR A LONG TIME, (E.G., AWAY ON A TRIP) IN THE INTEREST OF SAFETY, BE SURE TO UNPLUG IT FROM THE WALL OUTLET.
- DO NOT PLUG/UNPLUG THE PLUG WHEN YOUR HANDS ARE WET. THIS MAY CAUSE ELECTRIC SHOCK.
- IF YOU NEED TO REPLACE THE SUPPLIED AC ADAPTER OR AC CORD, THE SPECIFIED AC ADAPTER AND AC CORD MUST BE USED. CONTACT THE DEALER THAT YOU PURCHASED THE UNIT FROM.

Setting the language

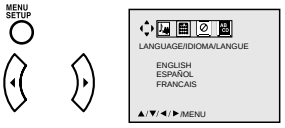
This TV/DVD can display the on screen language in English, Spanish or French in the TV mode.
Select the language you prefer first, then proceed with the other menu options.



Setting the language

1 **To turn on the TV/DVD, press POWER.**
The Power indicator on the front of the main unit will light.

2 **Press MENU, then press ◀ or ▶ to select option.**



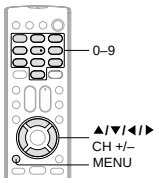
3 **Press ▲ or ▼ to select the desired language: English (ENGLISH), Spanish (ESPAÑOL) or French (FRANCAIS), then press ENTER.**

4 **Press MENU repeatedly until the menu screen is cleared.**

Notes:
- **If the unit does not operate properly, or No key operation (by the unit and/or the remote control):** Static electricity, etc., may affect the TV/DVD's operation. In such case, disconnect the AC cord once, then connect it again.
- The TV section has its own menu and also DVD section has its own menu (43).

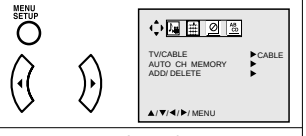
To memorize channels

This TV/DVD is equipped with a channel memory feature which allows channels to skip up or down to the next channel set into memory, skipping over unwanted channels. Before selecting channels, they must be programmed into the TV/DVD's memory. In addition to normal VHF and UHF channels, this TV/DVD can receive up to 113 Cable TV channels. To use this TV/DVD with an antenna, set the TV/CABLE selection to the TV position. When shipped from the factory, this selection is in the CABLE position.

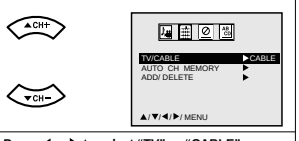


TV/CABLE selection

1 **Press MENU in the TV mode, then press ◀ or ▶ to select option.**

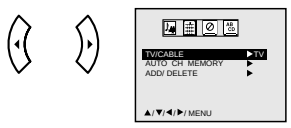


2 **Press ▲ or ▼ to select "TV/CABLE".**



3 **Press ◀ or ▶ to select "TV" or "CABLE".**

TV - VHF/UHF channels
CABLE - Cable TV channels



4 **Press MENU repeatedly until the menu screen is cleared.**

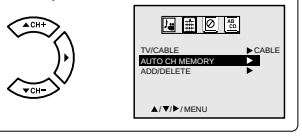
Cable TV chart
The chart below is typical of many cable system channel allocations.

Number on this TV	14	15	16	17	18	19	20	21	22
Corresponding Cable TV channel	A	B	C	D	E	F	G	H	I
23	24	25	26	27	28	29	30	31	32
J	K	L	M	N	O	P	Q	R	S
41	42	43	44	45	46	47	48	49	50
EE	FF	GG	HH	II	JJ	KK	LL	MM	NN
59	60	61	62	63	64	65	66	67	68
WW	AAA	BBB	CCC	DDD	EEE	FFF	GGG	HHH	III
77	78	79	80	81	82	83	84	85	86
RRR	SSS	TTT	UUU	VVV	WWW	XXX	YYY	ZZZ	86
95	96	97	98	99	100	101	102	103	104
A-5	A-4	A-3	A-2	A-1	100	101	102	103	104
113	114	115	116	117	118	119	120	121	122
113	114	115	116	117	118	119	120	121	122

Number on this TV	51	52	53	54	55	56	57	58
Corresponding Cable TV channel	OO	PP	QQ	RR	SS	TT	UU	VV
68	69	70	71	72	73	74	75	76
III	JJJ	KKK	LLL	MMM	NNN	OOO	PPP	QQQ
86	87	88	89	90	91	92	93	94
86	87	88	89	90	91	92	93	94
104	105	106	107	108	109	110	111	112
104	105	106	107	108	109	110	111	112
122	123	124	125	01				
122	123	124	125	5A				

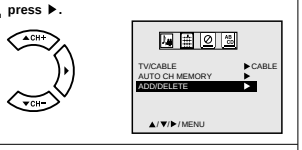
Automatic memory tuning

Press ▲ or ▼ to select the "AUTO CH MEMORY", then press ▶.
The TV will begin memorizing all the channels available in your area.

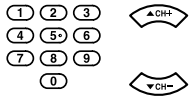


To ADD/DELETE channels

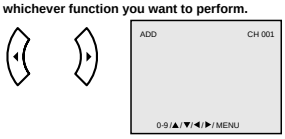
1 **Press ▲ or ▼ to select "ADD/DELETE", then press ▶.**



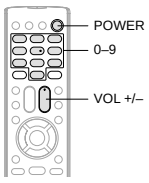
2 **Select the desired channel to be added or deleted using Direct channel selection (0–9) or CH +/–.**



3 **Press ◀ or ▶ to select "ADD" or "DELETE", whichever function you want to perform.**



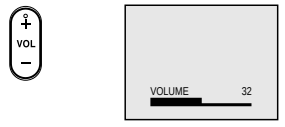
TV operation



TV operation

1 **To turn on the TV/DVD, press POWER.**
The Power indicator on the front of the main unit will light.

2 **Adjust the volume level by pressing VOL + or –. The volume level will be indicated on the screen by green bars. As the volume level increases, so do the number of bars. If the volume decreases, the number of green bars also decreases.**



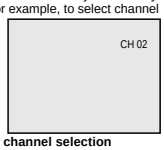
3 **Set the TV/CABLE selection to the appropriate position.** (22)

TV - VHF/UHF channels
CABLE - Cable TV channels

Auto power off
If a station being viewed stops broadcasting, the TV will automatically shut itself off after 15 minutes.

4 **Press direct channel selection (0–9) to select the channel.**

TV mode direct channel selection
When the TV/CABLE selection is in the TV position, all channels can be instantly selected by using two buttons. (for example, to select channel 2, press "0", then "2". If you press only "2", channel selection will be delayed for a few seconds.) For channels 10 and above, press the 2 digits in order.

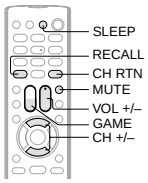


CABLE mode direct channel selection
When the TV/CABLE selection is in the CABLE position, channels can be selected as follows:
TO SELECT CABLE TV CHANNELS:
1-9: Press "**0**" twice, then 1-9 as needed. Example, to select channel 2, press "**002**".
10-12: Press "**0**", then the remaining 2 digits. Example, to select channel 12, press "**012**".
13-99: Press the 2 digits in order. Example, to select channel 36, press "**36**".
100-125: Press the 3 digits in order. Example, to select channel 120, press "**120**".
NOTE FOR CHANNELS 1-12:
If only 1 or 2 buttons are pressed, the corresponding channel will be selected in 2 seconds.

TV	CATV
VHF	VHF
2-13	2-13
UHF	STD/HRC/IRC
14-69	14-36
	(A) (W)
	37-59
	(AA) (WW)
	60-85
	(AAA) (ZZZ)
	86-94
	(86) (94)
	95-99
	(A-5) (A-1)
	100-125
	(100) (125)
	01
	(5A)

Note:
If a channel with no broadcast is selected, the sound will automatically be muted.

TV operation (continued)



TV operation

■ CHANNEL UP/DOWN
Press and release **CH +** or **–**. The channel automatically stops at the next channel set into memory.
For proper operation, before selecting channels, they should be set into the memory. See page 22 "To memorize channels".

■ RECALL
Press **RECALL** to display the current informations on the screen. Press **RECALL** again to clear the display.
- Channel number or external input mode
- Stereo or SAP (Second Audio Program) audio status
- Audio output status

■ CH RETURN
This button allows you to go back to the last channel selected by pressing **CH RTN**. Press **CH RTN** again to return to the last channel you were watching.

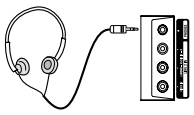
■ MUTE
Press **MUTE** to switch off the sound. The TV/DVD's sound will be silenced and "MUTE" will appear briefly on the screen. The sound can be switched back on by pressing this button again or one of **VOL +/–**.

■ SLEEP
To set the TV/DVD to turn off after a preset amount of time, press **SLEEP** on the remote control. The clock will count down 10 minutes for each press of **SLEEP** (120, 110, ...10, 0). After the sleep time is programmed, the display will appear briefly every ten minutes to remind you that the sleep timer is operating. To confirm the sleep timer setting, press **SLEEP** and the remaining time will be displayed for a few seconds. To cancel the sleep timer, press **SLEEP** repeatedly until the display turns to 0.

■ GAME MODE
After connecting a TV Game to the unit (see page 16), press **GAME**. The TV screen changes to the Game mode.

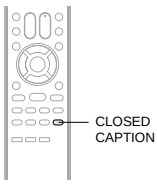
- The Game mode screen is adjusted to the suitable brightness for your eyes.
- Game timer function: After one hour the Game timer display will appear every 30 minutes for approx. 5 seconds showing how long the time has passed up to 4 hours.
- If **GAME** is pressed during standby mode, the unit turns on automatically and the Game mode screen appears on the screen.
- Interactive video games that involve shooting a "gun" type of joy-stick at an on-screen target may not work on this TV/DVD.

■ HEADPHONES
Insert a stereo headphones (not supplied) with a 1/8" mini plug into the PHONES jack on the front panel.
If you connect headphones, the sound from TV speakers is muted.



Closed captions

WHAT IS CLOSED CAPTIONING?
This television has the capability to decode and display closed captioned television programs. Closed captioning will display text on the screen for hearing impaired viewers or it will translate and display text in another language.

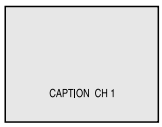


Closed captions

Captions: This closed caption mode will display text on the screen in English or another language (depending on the setting of the closed captions CH 1/2).
Generally, closed captions in English are transmitted on captions channel 1 and closed captions in other languages are transmitted on captions channel 2.

Text: The text closed caption mode will usually fill the screen with a programming schedule or other information. After selecting a closed caption mode, it will stay in effect until it is changed, even if the channel is changed.
If the captions signal is lost due to a commercial or a break in the signal, the captions will reappear when the signal is received again. If the channels are changed, the captions will be delayed approximately 10 seconds. The captions will appear in places on the screen where they will least interfere with the picture, usually on the bottom of the screen. News programs will usually show three-line closed captions which scroll onto the screen. Most other shows provide two or three lined captions placed near the character who is speaking so the viewer can follow the dialogue. Words in italics or underlined describe titles, words in foreign languages or words requiring emphasis. Words that are sung usually appear enclosed by musical notes.
For television programs broadcasting with closed captions, look in your TV guide for the closed captions symbol (CC).

TO VIEW CLOSED CAPTIONS
Press **CLOSED CAPTION** to switch between normal TV and the two closed caption modes (captions and full screen text). Closed captioning will display text on the screen for hearing impaired viewers.

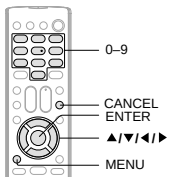


Notes:
- When selecting closed captions, the captioning will be delayed approximately 10 seconds.
- If no caption signal is received, no captions will appear, but the television will remain in the caption mode.
- Misspellings or unusual characters may occasionally appear during closed captioning. This is normal with closed captioning, especially with live programs. This is because during live programs, captions are also entered live. These transmissions do not allow time for editing.
- When captions are being displayed, on-screen displays, such as volume and mute may not be seen or may interfere with closed captions.
- Some cable systems and copy protection systems may interfere with the closed captioned signal.
- If using an indoor antenna or if TV reception is very poor, the closed caption decoder may not appear or may appear with strange characters or misspelled words. In this case, adjust the antenna for better reception or use an outdoor antenna.

Setting the V-Chip

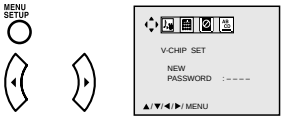
An age limitation can be set to forbid children to see and hear violent scenes or pictures for adults, etc. The TV/DVD corresponds to "TV RATING" and "MOVIE RATING". To use the V-Chip function, you must register a password.

Notes:
- If you forget the password, you cannot set the V-Chip.
- To avoid forgetting the password, write it down and keep in the safe place.

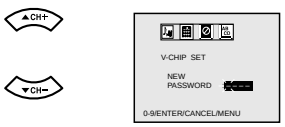


To register password

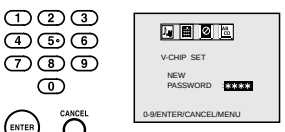
1 Press MENU, then press ◀ or ▶ to select option.



2 Press ▲ or ▼ to select "PASSWORD".

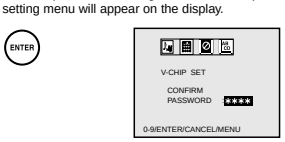


3 Enter the password (4 digits) using Number buttons (0–9), then press ENTER.
- If you input a wrong number, press **CANCEL**.



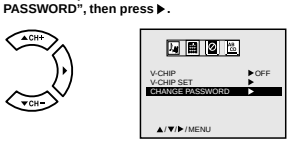
"✱" appears instead of the number.

4 Enter the same password again for the safety, then press ENTER.
Now the password was registered and V-Chip setting menu will appear on the display.

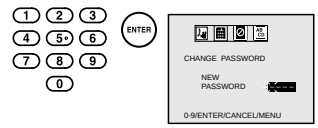


To change password

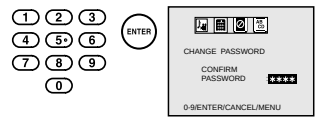
1 Repeat steps 1 ~ 3 in "To register password" as left, then press ▲ or ▼ to select "CHANGE PASSWORD", then press ▶.



2 Enter the new password using Number buttons (0–9), then press ENTER.

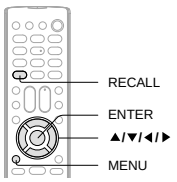


3 Enter the same password again using Number buttons (0–9) for safety, then press ENTER.



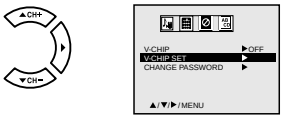
4 Press MENU repeatedly until the menu screen is cleared.

Note:
The V-Chip feature is available only for the U.S. V-Chip system. The Canadian V-Chip system is not supported.



To set the V-Chip

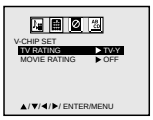
1 Repeat steps 1 ~ 3 in "To register password" as left page, then press ▲ or ▼ to select "V-CHIP SET", then press ▶.

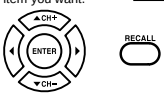


2 Press ▲ or ▼ to select "TV RATING", then press ◀ or ▶ to display the desired setting. After setting, press ENTER.

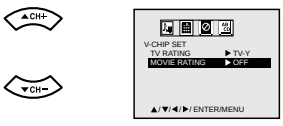
OFF : TV RATING is not set
TV-Y : All children
TV-Y7 : 7 years old and above
TV-G : General audience
TV-PG : Parental guidance
TV-14 : 14 years old and above
TV-MA: 17 years old and above

When you select TV-Y7, TV-PG, TV-14 or TV-MA, press **RECALL** to show the contained rating. Press ▲/▼ or ◀/▶ to select the desired item you want.

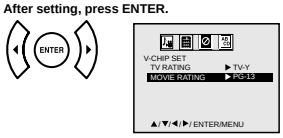




3 Press ▲ or ▼ to select "MOVIE RATING".

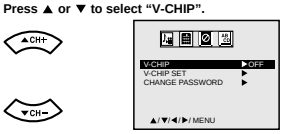


4 Press ◀ or ▶ to select desired rating. After setting, press ENTER.

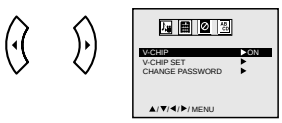


OFF : MOVIE RATING is not set
G : All ages
PG : Parental guidance
PG-13 : Parental guidance less than 13 years old
R : Under 17 years old Parental guidance suggested
NC-17 : 17 years old and above
X : Adult only

5 Press ▲ or ▼ to select "V-CHIP".



6 Press ◀ or ▶ to display "ON".
Now your settings were set into the memory.



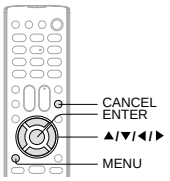
7 Press MENU repeatedly until the menu screen is cleared.

To use after the TV is protected
When the program applied to the V-Chip setting is received, enter the password, then press **ENTER**. Protection can be canceled.

Note:
The V-Chip function is activated only on programs that have the rating signal.

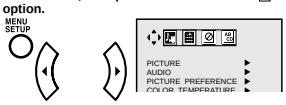
Picture control adjustment/ Adjusting the picture preference

Picture controls are factory preset but you can adjust them individually as follows: And also you can select four picture modes—Standard, Sports, Movie, and Memory—as described in the following table:

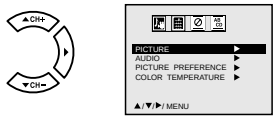


Picture control adjustment

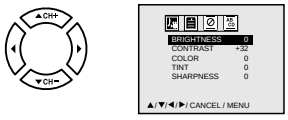
1 **Press MENU, then press ◀ or ▶ to select option.**



2 **Press ▲ or ▼ to select "PICTURE", then press ▶.**



3 **Press ▲ or ▼ to select the item you want to adjust, then press ◀ or ▶ to adjust the setting.**



Selection	◀ Pressing ▶	
BRIGHTNESS	darker	lighter
CONTRAST	lower	higher
COLOR	paler	deeper
TINT	reddish	greenish
SHARPNESS	softer	sharper

Note:
The CONTRAST default setting is set to maximum (+32) at the factory.

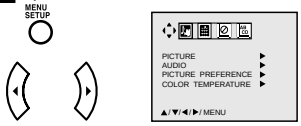
4 **After your desired setting press MENU repeatedly until the menu screen is cleared.**

MENU SETUP

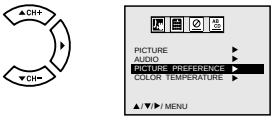
■ **To return all adjustments to the factory preset levels**
Press **CANCEL** while making picture adjustments.

Adjusting the picture preference

1 **Press MENU, then press ◀ or ▶ to select option.**



2 **Press ▲ or ▼ to select "PICTURE PREFERENCE", then press ▶.**



3 **Press ▲ or ▼ to select the desired picture mode, then press ENTER.**

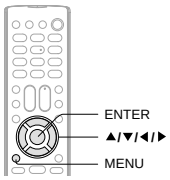
Mode	Picture quality
STANDARD	Standard picture quality (factory-set)
SPORTS	Bright and dynamic picture (factory-set)
MOVIE	Movie-like picture setting (factory-set)
MEMORY	Your personal preferences (set by you; see "Picture control adjustment" as left)

4 **After your desired setting press MENU repeatedly until the menu screen is cleared.**

MENU SETUP

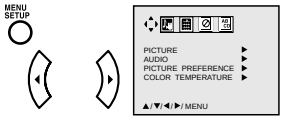
Note:
You cannot select "PICTURE PREFERENCE" in the Game mode.

Selecting the color temperature



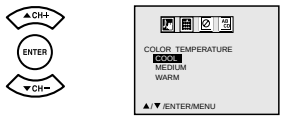
Selecting the color temperature

1 **Press MENU, then press ◀ or ▶ to select option.**



2 **Press ▲ or ▼ to select "COLOR TEMPERATURE", then press ▶.**

3 **Press ▲ or ▼ to select the desired color mode, then press ENTER.**



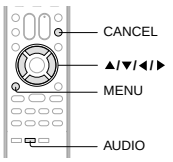
Mode	Picture quality
COOL	Bluish
MEDIUM	Neutral
WARM	Reddish

4 **After your desired setting press MENU repeatedly until the menu screen is cleared.**

MENU SETUP

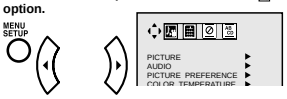
Sound control adjustment/ Stereo and Second Audio Program (SAP)

Sound controls are factory preset but you can adjust them individually as follows:
The TV/DVD is equipped with a feature known as multi-channel TV sound or MTS. MTS broadcasts greatly enhance TV viewing by bringing you programs with high fidelity stereo sound.
MTS also provides an extra channel called the Second Audio Program or SAP which broadcasters can use to transmit a second language for bilingual transmission or for other purposes.

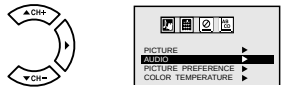


Sound control adjustment

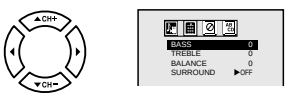
1 **Press MENU, then press ◀ or ▶ to select option.**



2 **Press ▲ or ▼ to select "AUDIO", then press ▶.**



3 **Press ▲ or ▼ to select the item you want to adjust, then press ◀ or ▶ to adjust the setting.**



BASS:
Press ◀ or ▶ to adjust the bass sound.
TREBLE:
Press ◀ or ▶ to adjust the treble sound.
BALANCE:
Press ◀ or ▶ to obtain an equal sound level from both speakers.
SURROUND:
Press ◀ or ▶ to select "ON" or "OFF".
ON: The dynamic presence and sound created offers a thoroughly enjoyable listening experience.
OFF: Normal sound.

4 **After your desired setting press MENU repeatedly until the menu screen is cleared.**

MENU SETUP

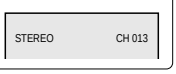
■ **To return BASS/TREBLE/BALANCE control adjustments to the factory preset levels**
Press **CANCEL** while making sound adjustments.

Listening to stereo sound

When the TV is turned on or a channel selection is made, make certain the "STEREO" appears on the screen. This means that Stereo broadcasting is available. You can enjoy stereo sound from the left and right speakers.

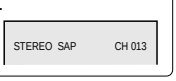
- When mono broadcasting is received, no indication is displayed.
- If the broadcast signal is not strong enough or clear stereo sound is not available, press **AUDIO** to change to mono sound. The noise may be eliminated. Press it again to return to the stereo sound.

AUDIO



Listening to SAP (Second Audio Program)

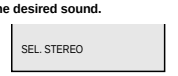
When the TV is turned on or a channel selection is made, make certain the SAP appears on the screen. This means that the Second Audio Program broadcasting is available.



To select desired sound

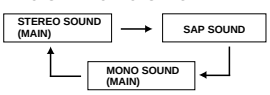
Press AUDIO to select the desired sound.

AUDIO



MONO + SAP BROADCASTING

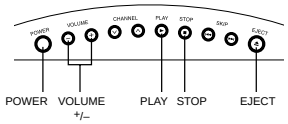
STEREO+SAP BROADCASTING



Playing a disc

This section shows you the basics on how to play a disc.

CAUTION
Keep your fingers well clear of the disc slot when disc is loading or unloading. Neglecting to do so may cause serious personal injury.



Basic playback

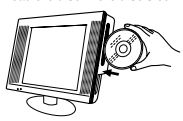
Preparations:
- When connecting to other equipment, turn the power off.

1 **Press POWER on the unit or on the remote control to turn on the unit.**
The Power indicator on the front of the main unit will light.
- Every time you press **POWER**, the TV/DVD starts from TV mode.
- When using an amplifier, switch on the amplifier.

POWER

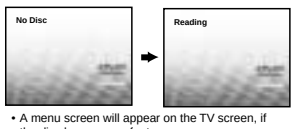
2 **Press TV/DVD on the remote control to select DVD mode.**
The DVD startup screen will appear on the screen. "Reading" display will change to "No Disc". (If DVD disc has already loaded, playback will start automatically.)

3 **Load the disc in the disc slot.**



Load the disc in the disc slot with the label side facing forward. (If the disc has a label.) Hold the disc without touching either of its surfaces, align it with the guides, and place it in position.
Note:
When you play the 8cm disc, you need an adapter (not supplied).

4 On the TV-screen, "No Disc" changes to "Reading" and then playback commences.



- A menu screen will appear on the TV screen, if the disc has a menu feature.
  Press ▲/▼ or ◀/▶ to select title, then press **ENTER**. Title is selected and play commences.

5 **Press VOLUME + or – to adjust the volume.**

VOLUME

6 **Press STOP to end playback.**

STOP

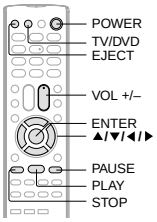
■ **Resuming facility**
- The unit records the stopped point, depending on the disc. "■" appears on the screen. Press **PLAY** to resume playback (from the scene point).
- If you press **STOP** again or unload the disc ("■" appears on the screen.), the unit will clear the stopped point.

■ **To start playback in the stop mode**
Press **PLAY**.

PLAY

Note:
If the unit does not operate properly:
Static electricity, etc., may affect the TV/DVD's operation. In such case, disconnect the AC cord once, then connect it again.

Playing a disc (continued)



■ **To obtain a higher quality picture**
Occasionally, some picture noise may appear on the TV screen while playing a DVD video disc because the high resolution pictures on these discs include a lot of information. In such case, you may reduce the SHARPNESS with the Picture control adjustment menu (see page 28).

■ **About** DVD VCD CD
The DVD VCD CD icons on the heading bar show the playable discs for the function described under that heading.
DVD : You can use this function with DVD video discs.
VCD : You can use this function with Video CDs.
CD : You can use this function with Audio CDs and CD-R/RW CDs.

Basic playback

■ **To pause playback (still mode)**
Press **PAUSE** during playback.

PAUSE

To resume normal playback, press **PLAY**.
• The sound is muted during still mode.

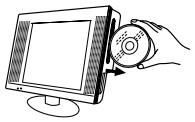
■ **To stop playback**
Press **STOP**.

STOP

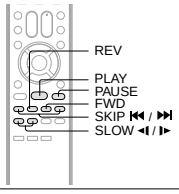
■ **To remove the disc**
Press **EJECT**.

EJECT

Remove the disc after the disc comes out.



Notes:
• If a non-compatible disc is loaded, "Incorrect Disc", "Region Code Error" or "Parental Error" will appear on the TV screen according to the type of loaded disc. In this case, check your disc again (see pages 8 and 45).
• Some discs may take a minute or so to start playback.
• When you set a single-faced disc label downwards (ie. the wrong way up), "Reading" will appear on the display for 30 seconds and then "Incorrect Disc" will continue to be displayed.
• Some discs may not work the resuming facility.
• Resuming cannot function when you play a PBC-featured Video CD while the PBC is on. To turn off the PBC, see page 39.
• Some playback operations of DVDs may be intentionally fixed by software producers. Since this unit plays DVDs according to the disc contents the software producers designed, some playback features may not be available. Also refer to the instructions supplied with the DVDs.
• Do not move the unit during playback. Doing so may damage the disc.
• Use the EJECT button to unload and eject the disc. Do not push the disc while it is moving. Doing so may cause the unit to malfunction.
• Do not put any objects other than discs on the disc slot. Doing so may cause the unit to malfunctions.
• There may be a slight delay between you pressing the button and the function activating.



Playing in fast reverse or fast forward directions

Press REV or FWD during playback.

REV FWD

REV: Fast reverse playback
FWD: Fast forward playback

Each time you press **REV** or **FWD** button, the playback speed changes.

■ **To resume normal playback**
Press **PLAY**.

PLAY

Notes:
• The TV/DVD mutes sound and subtitles during reverse and forward scan of DVD video discs. However, the TV/DVD plays sound during fast forward or fast reverse play of audio CDs.
• The playback speed may differ depending on the disc.

Playing frame by frame

Press PAUSE during still playback.

PAUSE

Each time you press **PAUSE**, the picture advances one frame.

■ **To resume normal playback**
Press **PLAY**.

PLAY

Note:
The sound is muted during frame by frame playback.

Playing in slow-motion

Press SLOW ◄I (REVERSE) or I► (FORWARD) during playback.

SLOW SLOW

Each time you press the button, the slow-motion speed changes.

■ **To resume normal playback**
Press **PLAY**.

PLAY

Notes:
• The sound is muted during slow-motion playback.
• The Video CD cannot play Reverse Slow.

Locating a chapter or track

Press SKIP I◄◄ or ►►I repeatedly to display the chapter or track number you want.
Playback starts from the selected chapter or track.

SKIP

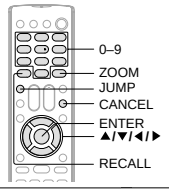
To locate succeeding chapters or tracks.

SKIP

Playback starts from the beginning of the current chapter or track.
When you press twice in quick successions, playback starts from the beginning of the preceding chapter or track.

Note:
A "Prohibition" symbol may appear at the upper left of the screen. This symbol means either the feature you tried is not available on the disc, or the TV/DVD cannot access the feature at this time. This does not indicate a problem with the TV/DVD.

Zooming/Locating desired scene



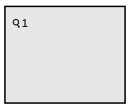
Zooming

This unit will allow you to zoom in on the frame image. You can then make selections by switching the position of the frame.

1 Press ZOOM during playback.

CH RTN/ZOOM

The center part of the image will be zoomed in.
Each press of **ZOOM** will change the ZOOM 🔍1 (x 1.3), 🔍2 (x 1.5) and 🔍3 (x 2.0).



2 Press ▲/▼/◄/► to view a different part of the frame.

CH+ CH–

You may move the frame from the center position to UP, DOWN, LEFT or RIGHT direction.

3 In the zoom mode press ZOOM repeatedly to return to a 1:1 view (🔍 Off).

CH RTN/ZOOM

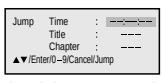
Notes:
• You can select the Pause, Slow or Search playback in the zoom mode.
• Some discs may not respond to zoom feature.

Locating desired scene

Use the title, chapter and time recorded on the DVD disc to locate the desired point to play back. In the case of VCD/CD discs, time and track are used to locate the desired point to play back.
To check the title, chapter and time, press **RECALL**.

1 Press JUMP during playback or stop mode.

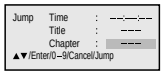
JUMP



• Time only works in resume stop mode.

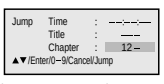
2 Press ▲ or ▼ to select the "Time", "Title" or "Chapter".

CH+ CH–



3 Press Number buttons (0–9) to change the number.

1 2 3 4 5 6 7 8 9 0



• If you input a wrong number, press **CANCEL**.
• Refer to the package supplied with the disc to check the numbers.

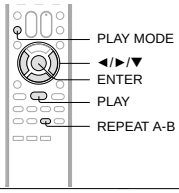
4 Press ENTER. Playback starts.

ENTER

• When you change the title, playback starts from Chapter 1 of the selected title.
• Some discs may not work in the above operation.

Note:
In case of the Video-CD playback with PBC, the JUMP does not work. To turn off PBC, see page 39.

Repeat playback/A-B Repeat playback



Repeat playback

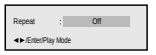
1 Press PLAY MODE during playback or stop mode.

PLAY MODE

2 [DVD]
Press ◄/► or ENTER once or twice to select "Chapter" or "Title".

ENTER

The unit automatically starts repeat playback after finishing the current title or chapter.



[Audio CD, Video CD]
Press ▼ to select "Repeat".
Press ◄/► or ENTER once or twice to select "Track" or "All".

ENTER CH–

The unit automatically starts repeat playback after finishing the current track.

• If you set the repeat mode during stop mode, press **PLAY** to start Repeat playback.

3 Press PLAY MODE again to make the screen disappear.

■ **To resume normal playback**
Select Repeat : "Off" in step 2.

Notes:
• Some discs may not work with the repeat operation.
• In case of Video CD with PBC, repeat functions are prohibited during playback.

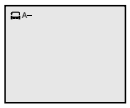
A-B Repeat playback

A-B repeat playback allows you to repeat material between two selected points.

1 Press REPEAT A-B during playback.

REPEAT A-B

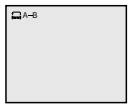
The start point is selected.



2 Press REPEAT A-B again.

REPEAT A-B

The end point is selected. Playback starts at the point that you selected. Playback stops at the end point, returns to Point A automatically, then starts again.



■ **To resume normal playback**
Press **REPEAT A-B** again.

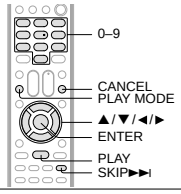
REPEAT A-B

"Off" appears on the screen.

Notes:
• In A-B Repeat mode, subtitles near the A or B locations may not be displayed.
• You cannot set the A-B Repeat for the scenes that include multiple angles.
• A-B Repeat playback does not work when Repeat playback is activated.
• You may not be able to set A-B Repeat, during certain scenes of the DVD.
• A-B Repeat does not work with an interactive DVD, MP3/WMA/JPEG CD.
• A-B Repeat is prohibited when PBC is on.

Program playback/Random playback

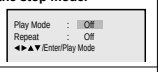
You can arrange the playback order of tracks or files on the disc.
And also the unit selects tracks or files at random and playback them.
These feature works for Audio CD, Video CD and MP3/WMA/JPEG CD.



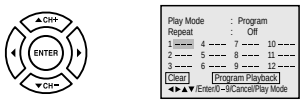
Program playback

1 **Press PLAY MODE in the stop mode.**

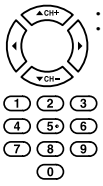
PLAY MODE



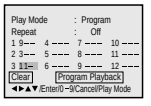
2 **Press ▲ or ▼ to select Play Mode, then press ◄/► or ENTER to select "Program".**



3 **Press ▲/▼ or ◄/► to select the programming position. Use Number buttons (0–9) to input the Track or file numbers.**



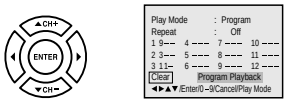
- To program others, repeat step 3.
- If you input a wrong number, press **CANCEL.**



4 **Press ▲/▼/◄/► to select "Program Playback" and press ENTER.**

The programs you selected will start to playback in the order.

- In case of JPEG file, press **SKIP** ►►I to continue the program playback.
- To resume normal playback, select Play Mode: "Off" in step 2.



■ **To change the program**

1. In the program mode, press ▲/▼/◄/► to select the track number.
2. Press **Number buttons (0–9)** to select the track number to be replaced.

■ **To clear the program one by one**

In the program mode, press ▲/▼/◄/► to select the track number. Then press **CANCEL**.

■ **To clear all the programs**

In the program mode, press ▲/▼/◄/► to select "Clear". Then press **ENTER**.

Notes:

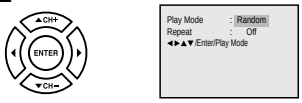
- In playing back the Video CD with PBC, you cannot set Program playback.
- The program is cancelled when you eject the disc or turn the power off.

Random playback

1 **Press PLAY MODE during playback or stop mode.**

PLAY MODE

2 **Press ▲/▼ to select Play Mode, then press ◄/► or ENTER to select "Random".**



3 **Press PLAY.**

PLAY

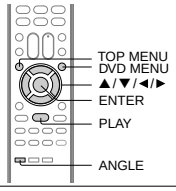
The Random Playback will start.

- If you set "Random" during playback mode, Random playback will begin after the track that is currently being played has ended.
- To resume normal playback, select Play Mode: "Off" in step 2.

Note:

In playing back the Video CD with PBC, you cannot set Random playback.

Changing angles/Title selection/DVD menu



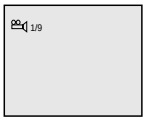
Changing angles

When playing back a disc recorded with multi-angle facility, you can change the angle that you are viewing the scene from.

1 **Press ANGLE during playback.**

ANGLE

The current angle will appear.



2 **Press ANGLE repeatedly until the desired angle is selected.**

ANGLE

Note:

Depending on the DVD, you may not be able to change the angles even if multi-angles are recorded on the DVD.

Title selection

Two or more titles are recorded on some discs. If the title menu is recorded on the disc, you can select the desired title.

1 **Press TOP MENU during playback.**

TOP MENU

Title menu appears on the screen.

2 **Press ▲/▼/◄/► to select the desired title.**

3 **Press ENTER or PLAY.**

ENTER

PLAY

The playback of the selected title will start.

Note:

Depending on the DVD, you may not be able to select the title. Depending on the DVD, a "title menu" may simply be called a "menu" or "title" in the instructions supplied with the disc.

DVD menu

Some DVDs allow you to select the disc contents using the menu.
When you playback these DVDs, you can select the subtitle language and sound-track language, etc. using the menu.

1 **Press DVD MENU during playback.**

DVD MENU

The DVD menu appears on the screen.

- Press **DVD MENU** again to resume playback at the scene when you pressed **DVD MENU**.

2 **Press ▲/▼/◄/► to select the desired item.**

3 **Press ENTER.**

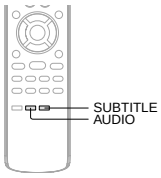
ENTER

The menu continues to another screen. Repeat steps 2 and 3 to set the item completely.

Note:

Depending on the DVD, you may not be able to resume playback from the scene point when you pressed the DVD MENU button.

Changing soundtrack language/ Subtitles



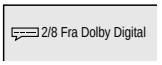
Changing soundtrack language

You can select the language when you play a multilingual disc.

1 **Press AUDIO during playback.**

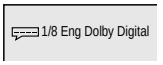
AUDIO

The current soundtrack language will appear.



2 **Press AUDIO repeatedly until the desired language is selected.**

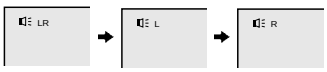
AUDIO



- The on screen display will disappear after a few seconds.

■ **In case of Video CD playback**

Audio type changes as follows each time you press **AUDIO**.



Notes:

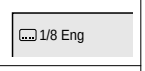
- If the desired language is not heard after pressing the button several times, the language is not recorded on the disc.
- Changing soundtrack language is cancelled when you eject the disc. The initial default language or available language will be heard if the disc is played back again.
- If you select DTS in playing DTS-encoded disc, no sound will be heard from the TV/DVD's speakers.

Subtitles

When playing back a disc recorded with subtitles, you can select the subtitle language or turn the subtitle off.

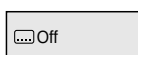
1 **Press SUBTITLE repeatedly during playback until your desired language appears.**

SUBTITLE



2 **To turn off the subtitle, press SUBTITLE until "Off" appears.**

SUBTITLE

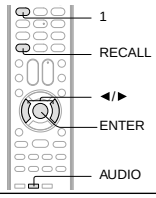


- The on screen display will disappear after a few seconds.

Notes:

- Depending on the DVD, you may not be able to change subtitles, or to turn subtitles on or off.
- While playing a DVD, the subtitle may change when you loaded or eject the disc.
- In some cases, a selected subtitle language may not be changed immediately.

Karaoke playback/Disc status/ To turn off the PBC



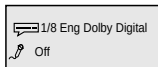
Karaoke playback

You can turn the vocal on or off recorded on the DVD KARAOKE.

1 **During DVD KARAOKE disc playback, press AUDIO.**

The KARAOKE symbol ( ) appears.

AUDIO



- If you play non-Karaoke disc, the KARAOKE symbol ( ) does not appear.
- Some Karaoke discs may not have the vocal on/off function. In this case, the KARAOKE symbol ( ) does not appear.

2 **Press ◄ or ► to select "On" or "Off".**

On : The primary vocal is output when it is recorded on the disc.
Off : The primary vocal is not output.

- The on screen display will disappear after a few seconds.

Notes:

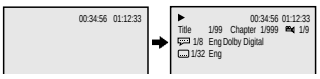
- The vocal output feature is used during playback of Dolby Digital (multi-channel) recorded DVD KARAOKE discs. This feature allows you to turn off vocal audio tracks, or restore them for background accompaniment.
- When playing Karaoke, connect appropriate audio equipment such as an amplifier to the TV/DVD.

Disc status

With each press of RECALL, the status of the disc will appear on the screen and change as follows.

RECALL

DVD



To make status display disappear, press **RECALL** again.

Video CD

To make status display disappear, press **RECALL** again.

Audio CD

When you playback the CD disc, the status display will appear on the screen and continue displaying.

To turn off the PBC

Press number button 1 in the stop mode, then press ENTER.

1 ENTER

MP3/WMA/JPEG CD operation

This unit can play back the MP3/WMA/JPEG-data which has been recorded on CD-R or CD-RW.
To produce the MP3/WMA/JPEG-data, you need a Windows-PC with CD-R/RW drive and a MP3/WMA/JPEG-encoding Software (not supplied).
The Apple-HFS-System cannot be played.

Note:
This unit requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R containing MP3/WMA files). Given the fact that technology in this area is still maturing, Toshiba cannot guarantee that all genre of recordable discs will produce optimal playback quality. The technical criteria set out in this owner's manual are meant as a guide only.
Please be advised that you must obtain permission from the applicable copyright owners to download copyrighted content, including music files, in any format, including the MP3 and WMA formats, prior to the downloading thereof. Toshiba has no right to grant and does not grant permission to download any copyrighted content.

MP3/WMA/JPEG CD information

Limitations on MP3/WMA/JPEG CD playback
- MP3/WMA/JPEG CD is the disc that is standardized by ISO9660, its file name must include 3-digits extension letters, "mp3", "wma", "jpg".
- MP3/WMA/JPEG CD must be correspond to the ISO standardized files.
- This unit can read 200 files per disc. If one directory has more than 200 files, it reads up to 200 files, the remaining files will be omitted.
- The unit is able to recognize up to a maximum of 50 directories per disc.
- MP3/WMA/JPEG CDs cannot be used for the purpose of recording.
- If the CD has both audio tracks and MP3/WMA/JPEG files, only audio tracks are played.
- It may take more than one minute for this unit to read MP3/WMA/JPEG files depending on its structure.
- Music recorded by "Joliet Recording Specification" can be played back, the file name is displayed (within 16 letters) on the screen. Long file names will be condensed.
- The music files recorded by "Hierarchical File System" (HFS) cannot be played.

Limitations on display
- The maximum number for display is 16 letters.
  Available letters for display are the following:
  capital or small alphabets of A through Z, numbers of 0 through 9, and _ (under score).
- Other letters than those above are replaced in hyphen.

Notes on MP3/WMA/JPEG files
To play back MP3/WMA/JPEG CD in the recorded order,
1. Use MP3/WMA/JPEG software that records data alphabetically or numerically.
2. Name each file including two-digit or three-digit number (ex. "01" "02" or "001" "002").
3. Refrain from making too many sub-folders.

Notice:
- Some MP3/WMA/JPEG CDs cannot be played back depending on the recording conditions.
- The CD-R/RW that has no music data or non MP3/WMA/JPEG files cannot be played back.

Standard, sampling frequency, and the bit rate:
MP3 CD
MPEG-1 Audio
32kHz, 44.1kHz, 48kHz
32kbps ~ 320kbps (constant bit rate or variable bit rate)
The recommend recording setting for a high-quality sound is 44.1kHz of sampling frequency and 128kbps of constant bit rate.
WMA CD
WMA version 7, and 8
32kHz, 48kbps
44.1kHz, 48kbps ~ 192kbps
48kHz, 128kbps ~ 192kbps
The file recorded by mono, 48kHz, 48 kbps is not available to this unit.

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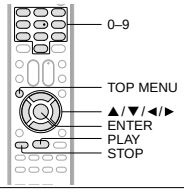
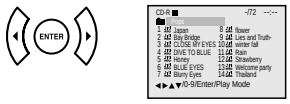


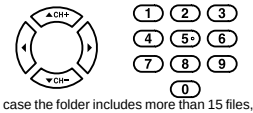
MP3/WMA CD playback

1 **Load a disc on which MP3 or WMA files have been recorded in the disc slot.**

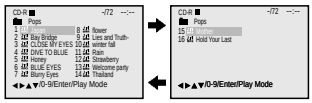
2 **A file menu screen will appear on the screen. Press ◄/► or ENTER to select folder.**



3 **Press ▲/▼/◄/► or Number buttons (0–9) to select the desired file.**



- In case the folder includes more than 15 files, press ◄ or ► to display next file list.



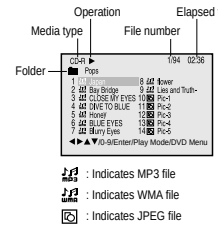
- When **PLAY** has been pressed after displaying the file menu, playback begins automatically starting from the first file. In this case, if the first file is an MP3/WMA file, only MP3/WMA files are played back in order. If the first file is a JPEG file, the first JPEG file is played back.

4 **Press ENTER.**
The selected file starts playing back.

5 **Press STOP to end playback.**

- The unit records the stopped point. "⚑" appears on the screen. Press **PLAY** to resume playback (from the scene point).
- If you press **STOP** again or unload the disc, the unit will clear the stopped point.

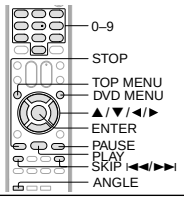
About file menu



Notes:
- The picture menu is displayed when the FUJICOLOR CD or the Kodak Picture CD are played. To display the file menu, press **TOP MENU**.
- In the case of a CD containing a mixture of MP3, WMA and JPEG files, the files are played back by selecting them from the file menu.
- MP3 or WMA file on the Kodak Picture CD is not recognized on this unit.

Notes:
- During MP3/WMA/JPEG playback, you cannot use JUMP, A-B Repeat functions.
- You can use Repeat (Track or All), Random functions and Program playback for MP3/WMA/JPEG CD playback (see pages 35 and 36).
- In the case of a CD containing a mixture of MP3, WMA and JPEG files, the files are played back by selecting them from the file menu.

MP3/WMA/JPEG CD operation (continued)

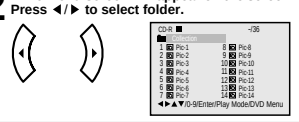


You can select your desired JPEG file on the file menu and picture menu. The selected JPEG file is automatically adjusted to the TV screen. (When the aspect ratio of the JPEG file is different to the TV screen, the black bar will appear at the top and bottom, or the both sides of the TV screen.

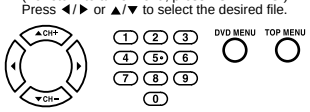
JPEG CD playback

1 **Load a disc on which JPEG files have been recorded in the slot.**

2 **A file menu screen will appear on the screen. Press ◄/► to select folder.**

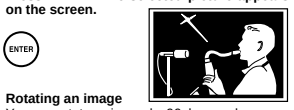


3 **Press ▲/▼/◄/► or Number buttons (0–9) to select the desired file.**
To display a picture menu, press **DVD MENU**. (To return to a file menu, press **TOP MENU**.)
Press ◄/► or ▲/▼ to select the desired file.



- To display next list, press **SKIP** ⏮/⏭.
- When **PLAY** has been pressed after displaying the file menu, playback begins automatically starting from the first file. In this case, if the first file is a JPEG file, the first JPEG file is played back. If the first file is an MP3/WMA file, only MP3/WMA files are played back in order.

4 **Press ENTER. The selected picture appears on the screen.**



Rotating an image
You can rotate an image by 90 degrees by pressing **ANGLE** during playback of the image.
"⏩", "⏩", "⏩" or "⏩" appears briefly on the screen.

5 **Press STOP to end playback.**
The file menu appears on the screen.
If you want to watch the other file, repeat steps 3 ~ 4.

Slide show playback

The slide show enables you to view pictures (files) one after another automatically.

Preparation:
- Set "JPEG Interval" setting to "5 Seconds", "10 Seconds" or "15 Seconds" (44).

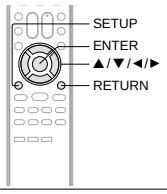
1 **Select your desired starting file for the slide show in the step 3 as left.**

2 **Press ENTER to start slide show from the selected file.**

- If you press **PAUSE** during the slide show, the slide show stops temporary. " ⏸ " appears briefly on the picture.
  If the picture appears upside down or sideways, press **ANGLE** repeatedly until it's right side up.
  "⏩", "⏩", "⏩" or "⏩" appears briefly on the screen.
  Press **PLAY** or **SKIP** ⏭ again to resume the slide show.
- When the slide show playback finished the file list appears.
- To stop the slide show, press **STOP**. The file list appears.

Customizing the function settings

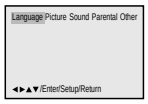
You can change the default settings of the DVD mode to customize performance to your preference.



Setting procedure

1 **Press SETUP during stop mode.**

The following on-screen display appears.



2 **Press ◄ or ► to select the desired section, then press ▼ or ENTER.**

3 **Press ▲ or ▼ to select the desired option.**

4 **Change the selection using ▲/▼/◄/► or ENTER, by referring to the corresponding pages 44 and 45.**

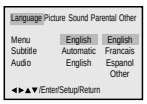
- Repeat step 3 and 4 to change other settings.
- To select another operation, go back to step 2 by pressing ▲ repeatedly.

5 **To make SETUP screen disappear, press SETUP or RETURN.**

Section	Option	Details	Page
Language	**Menu** **Subtitle** **Audio**	To select the language of "Menu", "Subtitle" and "Audio" if more than one languages are recorded on the disc.	44
Picture	**Tv Screen**	To select a picture size.	44
	Display	To turn on or de-activate the operational status display on the screen.	44
	JPEG Interval	To select a preferred setting for the slide show playback.	44
	Select Files	To select your desired file type for playing back a containing a mixture of MP3, WMA, JPEG files.	44
Sound	**DRC**	To select On or Off for DRC (Dynamic Range Control).	45
Parental	**Password**	Input 4-digit password to set the parental level.	45
	Parental	To select a preferred parental level for the parental setting.	
Other	**OSD Language**	To select a preferred language for on screen display.	45

Setting details

Language



■ **Menu, Subtitle, Audio**
You can select the language of "Menu", "Subtitle" and "Audio" if more than one languages are recorded onto the disc.

English, Francais, Espanol:
The selected language will be heard or seen.

Other:
Other language can be selected (see the "Language code list" 47).

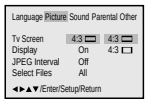
Original: (Audio)
The unit will select the first priority language of each disc.

Automatic: (Subtitle)
- The unit will automatically select the same language in the AUDIO setting.
- When the unit selects the same language as the AUDIO, the subtitles will not appear during playback.
- When you do not use the same language as the AUDIO, the subtitles will appear during playback.

Off: (Subtitle)
Subtitles do not appear.

Note:
If the selected language is not recorded on the disc, the first-priority language is selected.

Picture



■ **Tv Screen**
You have the following screen sizes to choose from:

4:3 Letter box:
When playing back a wide screen-DVD disc, it displays the wide picture with black bands at the top and bottom of screen.

4:3 Pan scan:
It displays the wide picture on the whole screen with left and right edges automatically cut off.

Note:
If the DVD disc is not formatted in the pan & scan style, it displays 4:3 style.

■ **Display**
On screen display can be switched on or off when you press the buttons.

On: On screen displays appear when you press the buttons (factory setting).
Off: On screen displays do not appear when you press any buttons.

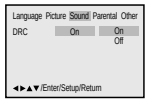
■ **JPEG Interval**
You can continuously play back all JPEG files automatically.
After the setting below, start playing the disc on which JPEG files have been recorded.

Off:
Plays back one file at a time.
5 Seconds:
Plays back images in the form of a slide show at 5 second intervals.
10 Seconds:
Plays back images in the form of a slide show at 10 second intervals.
15 Seconds:
Plays back images in the form of a slide show in 15 second intervals.

■ **Select Files**
When playing back a CD containing a mixture of MP3, WMA and JPEG files, only MP3/WMA or JPEG files can be displayed on the file menu.

All:
Displays all files.
Music Only:
Displays only MP3/WMA files.
Pictures Only:
Displays only JPEG files.

Sound

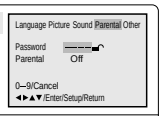


■ **DRC**
DRC (Dynamic Range Control) enables you to control the dynamic range so as to achieve a suitable sound for your equipment.

On: Loud sound such as explosion or similar is toned down slightly when played back. This makes it suitable for when it is connected to a stereo.
Off: It plays back at the recording level on the disc.

Notes:
- This function works only during playback of Dolby Digital recorded discs.
- The level of Dynamic Range Reduction may differ depending on DVD video disc.

Parental



Parental control setting
Some discs are specified not suitable for children. Such discs can be limited not to play back with the unit.

1) Press ▲ or ▼ to select "Parental", then press ◄ or ► until the level you require appears.
   - Level Off: The parental control setting does not function.
   - Level 8: All DVD software can be played back.
   - Level 1: DVD software for adults cannot be played back.

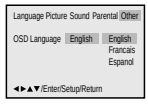
   Select from the level 1 to level 8. The limitation will be more severe as the level number is lower.
2) Press ▲ or ▼ to select "Password".
   Press **Number buttons (0–9)** to input a 4-digit password. Be sure to remember this number!
   • If you input a wrong number, press **CANCEL**.
3) Press **ENTER** to store the password.
   Note: Now the rating is locked and the setting cannot be changed unless you enter the correct password.
4) Press **EJECT** to activate parental control setting.

Notes:
- Depending on the discs, the unit cannot limit playback.
- Some discs may not be encoded with specific rating level information though its disc jacket says "adult." For those discs, the age restriction will not work.

To change the parental level
1) Press ▲ or ▼ to select "Password".
2) Press **Number buttons (0–9)** to enter the password you have stored.
3) Press **ENTER**.
   • The rating is now unlocked.
4) Press ▲ or ▼ to select "Parental", then press ◄ or ► to change the parental level.
5) Press ▲ or ▼ to select "Password", then press **Number buttons (0–9)** to enter the password.
   Note: You can change the password if you want.
6) Press **ENTER**.
   Now the parental level is changed and locked.

If you forget the password...
1. Press **EJECT**.
2. Remove the disc after the disc comes out.
3. "No Disc" appears on the screen.
4. While holding **STOP** down on the top of the unit, press **7** on the remote control. "PASSWORD CLEAR" appears on the screen.
5. Enter a new password again.

Other



■ **OSD Language**

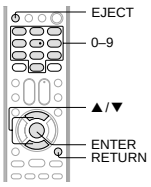
The setup language can be selected.

English: To display OSD language in English.
Francais: To display OSD language in French.
Espanol: To display OSD language in Spanish.

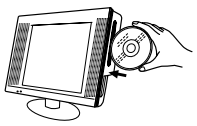
Note:
If each setup (pages 44 and 45) has been completed, the unit can always be worked under the same conditions (especially with DVD discs).
Each setup will be retained in the memory even if you turn the power off.

Temporary disabling of rating level by DVD disc

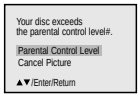
Depending on the DVD disc, the disc may try to temporarily cancel the rating level that you have set.
It is up to you to decide whether to cancel the rating level or not.



1 **Load a DVD disc.**

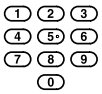


2 **If the DVD disc has been designed to temporarily cancel the Rating level, the screen which follows the "Reading" screen will change, depending on which disc is played. If you select "YES" with the ENTER key, "Your disc exceeds the parental control level#." screen will then appear.**

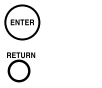


3 **If you wish to cancel the set rating level temporarily, select "Parental Control Level" with ▲ or ▼, then press ENTER. If the 4-digit password at step 2 on page 45 has been set, the password entering screen will appear as shown in step 4.**
Alternatively, if the password has not been set, playback will commence. If you don't know (or have forgotten) the password, select "Cancel Picture". The setting screen will disappear. Press EJECT to remove the disc.

4 **Enter the password with Number buttons (0–9). Then press ENTER.**



To exit the entry, press **RETURN**.



5 **Playback will commence if the entered password was correct.**

Note:
This temporary cancellation of rating level will be kept until the disc is ejected.
When the disc is ejected, the original rating level will be set again automatically.

Language code list

Enter the appropriate code number for the initial settings "Menu", "Subtitle" and/or "Audio" 44.

Language Name	Code	Language Name	Code	Language Name	Code	Language Name	Code
Abkhazian	1112	Fiji	1620	Lingala	2224	Singhalese	2919
Afar	1111	Finnish	1619	Lithuanian	2230	Slovak	2921
Afrikaans	1116	French	1628	Macedonian	2321	Slovenian	2922
Albanian	2927	Frisian	1635	Malagasy	2317	Somali	2925
Amharic	1123	Galician	1722	Malay	2329	Spanish	1529
Arabic	1128	Georgian	2111	Malayalam	2322	Sundanese	2931
Armenian	1835	German	1415	Maltese	2330	Swahili	2933
Assamese	1129	Greek	1522	Maori	2319	Swedish	2932
Aymara	1135	Greenlandic	2122	Marathi	2328	Tagalog	3022
Azerbaijani	1136	Guarani	1724	Moldavian	2325	Tajik	3017
Bashkir	1211	Gujarati	1731	Mongolian	2324	Tamil	3011
Basque	1531	Hausa	1811	Nauru	2411	Tatar	3030
Bengali; Bangla	1224	Hebrew	1933	Nepali	2415	Telugu	3015
Bhutani	1436	Hindi	1819	Norwegian	2425	Thai	3018
Bihari	1218	Hungarian	1831	Oriya	2528	Tibetan	1225
Breton	1228	Icelandic	1929	Panjabi	2611	Tigrinya	3019
Bulgarian	1217	Indonesian	1924	Pashto, Pushto	2629	Tonga	3025
Burmese	2335	Interlingua	1911	Persian	1611	Turkish	3028
Byelorussian	1215	Irish	1711	Polish	2622	Turkmen	3021
Cambodian	2123	Italian	1930	Portuguese	2630	Twi	3033
Catalan	1311	Japanese	2011	Quechua	2731	Ukrainian	3121
Chinese	3618	Javanese	2033	Rhaeto-Romance	2823	Urdu	3128
Corsican	1325	Kannada	2124	Romanian	2825	Uzbek	3136
Croatian	1828	Kashmiri	2129	Russian	2831	Vietnamese	3219
Czech	1329	Kazakh	2121	Samoan	2923	Volapük	3225
Danish	1411	Kirghiz	2135	Sanskrit	2911	Welsh	1335
Dutch	2422	Korean	2125	Scots Gaelic	1714	Wolof	3325
English	1524	Kurdish	2131	Serbian	2928	Xhosa	3418
Esperanto	1525	Laothian	2225	Serbo-Croatian	2918	Yiddish	2019
Estonian	1530	Latin	2211	Shona	2924	Yoruba	3525
Faroese	1625	Latvian, Lettish	2232	Sindhi	2914	Zulu	3631

Troubleshooting

Use the following check list for troubleshooting when you have problems with your unit. Consult your local dealer or service outlet if problems persist.
Be sure all connections are properly made when using with other units.

SYMPTOMS	POSSIBLE SOLUTIONS	PAGE
POWER		
TV/DVD does not operate.	• Make sure the connection of the AC adapter and AC cord. • Try another AC outlet. • Unplug unit, then plug it back in.	20
TV BROADCAST RECEPTION		
Poor sound or No sound.	• Station or Cable TV may have problems, try another station. • Check Volume adjustments. • Check for sources of possible interference.	23 23 50
Poor picture or No picture.	• Station or Cable TV may have problems, try another station. • Check antenna or Cable TV connections, reorient antenna. • Check for sources of possible interference. • Check picture control adjustments.	23 15 50 28
Poor reception on some channels.	• Station or Cable TV may have problems, try another station. • Station signal is weak, reorient antenna to receive weaker station. • Check for sources of possible interference.	23 14,15 50
Poor color or no color.	• Station or Cable TV may have problems, try another station. • Make sure channels are set into memory. • Check picture control adjustments. • Check antenna or Cable TV connections, reorient antenna. • Check for sources of possible interference.	23 22 28 15 50
Picture wobbles or drifts.	• Station or Cable TV may have problems, try another station. • Make sure channels are set into memory. • Cable TV company is scrambling signal. • Check antenna orientation.	23 22 – –
No CATV reception.	• Check all Cable TV connections. • Set TV/CABLE selection to the CABLE position. • Station or Cable TV system problems, try another station.	15 22 23
Horizontal or diagonal bars on screen.	• Check antenna connections, reorient antenna. • Check for sources of possible interference.	14,15 50
No reception above channel 13.	• Make sure TV/CABLE selection is in the appropriate position. • If using antenna, check UHF antenna connections.	22 14
TV shuts off.	• No broadcast on station tuned. • Auto power off feature worked. • Sleep Timer is set. • Power interrupted.	22 23 24 –
Closed - Caption is not activated.	• TV station experiencing problems or program tuned is not closed captioned. Try another channel. • Check Cable TV connection or VHF/UHF antenna, reposition or rotate antenna. • Press CLOSED CAPTION button to turn on the closed caption decoder.	23 14,15 25
Display is not shown in your language.	• Select proper language in the menu options.	21

SYMPTOMS	POSSIBLE SOLUTIONS	PAGE
DVD		
Playback doesn't start.	• No disc is loaded. • The disc may be dirty. Clean up the disc. • The unit cannot play CD-ROMs, etc.	31 7 8
No picture.	• TV/DVD selector is not set correctly.	31
No sound.	• Check the input selector of the amplifier is set properly. • The unit is in the special playback mode. • Select the correct Audio Input/Output position on AV amplifier.	– 33 18
Picture is distorted during fast reverse/forward playback.	• The picture will be distorted occasionally.	–
Stopping playback, search, slow-motion play, repeat play, or program play, etc. cannot be performed.	• Some discs may not do some of the functions.	–
No on-screen display.	• Select Display On.	44
The unit or remote operation key is not functioning.	• Turn off the unit and unplug the AC power cord for several minutes, then replug it.	–
Playback does not start when the title is selected.	• Check the RATING LEVEL setup.	45
Audio soundtrack and/or subtitle language is not changed when you play back a DVD.	• Multilingual language is not recorded on the DVD disc.	38
No subtitle.	• Some discs have no subtitles. • Subtitles are cleared. Press the SUBTITLE button.	38
Angle cannot be changed.	• Multi-angles are not recorded on the DVD disc.	37
" ✋ " appears on the screen.	• The function is prohibited with the unit or the disc.	33
REMOTE CONTROL		
The remote control does not function.	• Aim the remote control at the remote sensor. • Operate within approx. 5 meters or reduce the light in the room. • Clear the path of the beam. • The batteries are weak. Replace the batteries. • Check the batteries are inserted correctly.	13

Reception disturbances

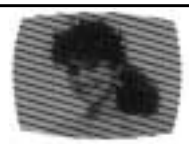
Most types of television interference can be remedied by adjusting the height and position of the VHF/UHF antenna. Outdoor antennas are recommended for best results. The most common types of television interference are shown below. If one of these symptoms appear when the TV/DVD is connected to a Cable TV system, the disturbance may be caused by the local Cable TV company broadcast.

IGNITION
Black spots or horizontal streaks may appear, the picture may flutter or drift. Usually caused by interference from automobile ignition systems, neon lamps or AC powered tools and appliances such as drills or hair dryers.

GHOSTS
Ghosts are caused by the television signal following two paths. One is the direct path and the other is reflected by tall buildings, hills or other large objects. Changing the direction or position of the antenna may improve the reception.

SNOW
If the TV/DVD is located far from the TV station, in a fringe reception area where the signal is weak, small dots may appear in the picture. If the signal is extremely weak, the installation of a larger external antenna may be necessary.

RADIO FREQUENCY INTERFERENCE (RFI)
Caused by two-way radios, this type of interference produces moving ripples or diagonal streaks in the picture. Some cases may cause a loss of contrast in the picture. Changing the direction and position of the antenna or installing an RFI filter may improve the picture.



CARE AND MAINTENANCE
To prevent fire or shock hazard, disconnect the TV/DVD from the power source before cleaning.
Use caution when cleaning or wiping the plastic parts.

Specifications

General

Power supply	AC 120V 60Hz (with supplied AC adapter)
Power consumption	Operation: 62 W, Stand by: 1 W (with supplied AC adapter)
Weight	12.1 lbs (5.5 kg)
Dimensions	Width: 17-3/16 inches (437 mm) Height: 13-1/16 inches (331.5 mm) Depth: 7-1/4 inches (184 mm)
Operating temperature	5˚C-40˚C (41˚F-104˚F)
Operating humidity	Less than 80% RH (No condensation)

Television

LCD panel	14 inch diagonal (Screen size is approximate.)
Display method	Color TFT LCD
Number of pixels	640 (Horizontal) x 480 (Vertical)
Tuner type	F-Synth
Receiving channels	VHF: 2-13 UHF: 14-69 CATV: 1-125 (4A, A5~A1, A~I, J~W, W+1~W+84)
Antenna input	VHF/UHF 75 Ω
Speaker	1-1/2 x 2-11/16 inches (38.1 x 68.6 mm), 16 Ω x 2
Audio output power	1.5W + 1.5W

DVD/CD Player

Signal system	NTSC
Applicable disc	1. DVD (12cm, 8cm [with Disc adapter]) 2. CD (12cm, 8cm [with Disc adapter])
Pickup	1-Lens, 2-Beams System

Input/Output

S-Video input	(Y) 1.0 V (p-p), 75 Ω, negative sync., Mini DIN 4-pin x 1 (C) 1.0 V (p-p), 75 Ω
Component video input	(Y) 1.0 V (p-p), 75 Ω, negative sync., pin jack x 1 (P_B/C_B, P_R/C_R) 0.7V (p-p), 75 Ω, pin jack x 2
Video input	1.0 V (p-p), 75 Ω, negative sync., pin jack x 2
Audio input	–8dBm, 50 kΩ, negative sync., pin jack (L/R) x 2
Digital audio output (Coaxial)	0.5 V (p-p), 75 Ω, pin jack x 1
Headphone	ø3.5mm stereo mini jack x 1

Accessories

Remote control (DC-LB1)	1
Batteries (R03/AAA)	2
AC adapter (AD-25U)	1
AC cord (for AC adapter)	1
300-75 Ω matching transformer	1
Owner's manual (this booklet)	1

- This model complies with the above specifications.
- Designs and specifications are subject to change without notice.
- This model may not be compatible with features and/or specifications that may be added in the future.

Limited United States Warranty
LCD TV/DVD Combination - Depot Repair Warranty

Toshiba America Consumer Products, L.L.C. ("TACP") makes the following limited warranties to original consumers in the United States. THESE LIMITED WARRANTIES EXTEND TO THE ORIGINAL CONSUMER PURCHASER OR ANY PERSON RECEIVING THIS LCD TV/DVD COMBINATION AS A GIFT FROM THE ORIGINAL CONSUMER PURCHASER AND TO NO OTHER PURCHASER OR TRANSFEREE.

LCD TV/DVD COMBINATIONS PURCHASED IN THE U.S.A. AND USED ANYWHERE OUTSIDE OF THE U.S.A., INCLUDING, WITHOUT LIMITATION, CANADA AND MEXICO, ARE NOT COVERED BY THESE WARRANTIES.

LCD TV/DVD COMBINATIONS PURCHASED ANYWHERE OUTSIDE OF THE U.S.A., INCLUDING, WITHOUT LIMITATION, CANADA AND MEXICO, AND USED IN THE U.S.A., ARE NOT COVERED BY THESE WARRANTIES.

Limited One (1) Year Warranty on Parts and Labor
TACP warrants this LCD TV/DVD Combination and its parts against defects in materials or workmanship for period of one (1) year after the date of original retail purchase. DURING THIS PERIOD, TACP WILL, AT TACP'S OPTION, REPAIR OR REPLACE A DEFECTIVE PART WITH A NEW OR REFURBISHED PART WITHOUT CHARGE TO YOU.

***Rental Units**
The warranty for LCD TV/DVD Combination rental units begins on the date of the first rental or thirty (30) days after the date of shipment to the rental firm, whichever comes first.

***Commercial Units**
LCD TV/DVD Combinations sold and used for commercial purposes have a limited warranty for all parts and labor, which warranty begins on the date of original retail purchase and ends on the date that is ninety (90) days thereafter.

Owner's Manual and Product Registration Card
Read this owner's manual thoroughly before operating this LCD TV/DVD Combination.
Complete and mail the enclosed product registration card or register your LCD TV/DVD Combination on-line at www.tacp.toshiba.com/service as soon as possible. By registering your LCD TV/DVD Combination you will enable TACP to bring you new products specifically designed to meet your needs and help us to contact you in the unlikely event a safety notification is required under the Consumer Product Safety Act. Failure to complete and return the product registration card does not diminish your warranty rights.

Your Responsibility
THE ABOVE WARRANTIES ARE SUBJECT TO THE FOLLOWING CONDITIONS:

(1) You must retain your bill of sale or provide other proof of purchase.

(2) All warranty servicing of this LCD TV/DVD Combination must be made by the Depot Warranty Repair Center specified by the TACP Consumer Solutions Center.

(3) The warranties from TACP are effective only if the LCD TV/DVD Combination is purchased and operated in the Continental U.S.A. or Puerto Rico.

(4) Labor service charges for set installation, setup, adjustment of customer controls and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.

(5) Warranties extend only to defects in materials or workmanship as limited above, and do not extend to any LCD TV/DVD Combination or parts that have been lost or discarded by you or to damage to the LCD TV/DVD Combination or parts caused by fires, misuse, accident, Acts of God (such as lightning or fluctuations in electric power), improper installation, improper maintenance, or use in violation of instructions furnished by TACP; use or malfunction through simultaneous use of this LCD TV/DVD Combination and connected equipment; or to units that have been modified or had the serial number removed, altered, defaced, or rendered illegible.

How to Obtain Warranty Services
If, after following all of the operating instructions in this manual and checking the section "Troubleshooting," you find that service is needed:

(1) For instructions on how to obtain warranty service for your LCD TV/DVD Combination, contact TACP's Consumer Solution Center toll free at 1-800-631-3811.
(2) You must include a copy or original bill of sale or other proof of purchase along with the entire LCD TV/DVD Combination to the Depot Warranty Repair Center specified by the TACP Consumer Solutions Center. You are responsible for all inbound transportation and insurance charges for the LCD TV/DVD Combination to the Depot Warranty Repair Center specified by the TACP Consumer Solutions Center.

For additional information, visit TACP's website: www.tacp.toshiba.com

ALL WARRANTIES IMPLIED BY THE LAW OF ANY STATE OF THE U.S.A., INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE LIMITED WARRANTIES SET FORTH ABOVE. WITH THE EXCEPTION OF ANY WARRANTIES IMPLIED BY THE LAW OF ANY STATE OF THE U.S.A. AS HEREBY LIMITED, THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, AGREEMENTS, AND SIMILAR OBLIGATIONS OF TACP WITH RESPECT TO THE REPAIR OR REPLACEMENT OF ANY PARTS.
IN NO EVENT SHALL TACP BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, BUSINESS INTERRUPTION, OR MODIFICATION OR ERASURE OF RECORDED DATA CAUSED BY USE, MISUSE OR INABILITY TO USE THIS LCD TV/DVD COMBINATION).

No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of TACP arising under the warranty or under any statute, or law of the United States or any state thereof, is hereby limited to ninety (90) days from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE IN THE U.S.A. SOME STATES OF THE U.S.A. DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, WHEN AN ACTION MAY BE BROUGHT, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE PROVISIONS MAY NOT APPLY TO YOU UNDER SUCH CIRCUMSTANCES.

CAUTION

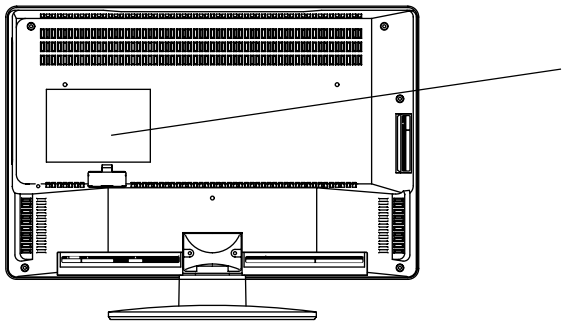
THIS LCD COLOR TELEVISION EMPLOYS A LASER SYSTEM.

TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS SERVICE MANUAL CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT AN AUTHORIZED SERVICE LOCATION-SEE SERVICE PROCEDURE.

USE OF CONTROLS, ADJUSTMENTS OR THE PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

TO PREVENT DIRECT EXPOSURE TO LASER BEAM, DO NOT TRY TO OPEN THE ENCLOSURE. VISIBLE LASER RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. DO NOT STARE INTO BEAM.

Location of the required Marking
The rating sheet and the safety caution are on the rear of the unit.



CERTIFICATION: COMPLIES WITH FDA RADIATION PERFORMANCE STANDARDS, 21 CFR SUBCHAPTER J.

PREPARATION OF SERVICING

The laser diode used for a pickup head may be destroyed with external static electricity.
Moreover, even if it is operating normally after repair, when static electricity discharge is received at the time of repair, the life of the product may be shortened.
Please perform the following measure against static electricity, be careful of destruction of a laser diode at the time of repair.

- Place the unit on a workstation equipped to protect against static electricity, such as conductive mat.
- Soldering iron with ground wire or ceramic type is used.
- A worker needs to use a ground conductive wrist strap for body.

IMPORTANT SERVICE SAFETY INFORMATION

Safety precautions to be followed during servicing:

1. Parts marked with an ⚠ are critical parts for safety. Replace only with the one described in the parts list.
2. Before returning the DVD product to the customer, make the appropriate leakage current check or resistance measurements to ensure that exposed parts are properly insulated from the supply circuit.

A leakage current check is recommended for this unit. Plug the AC line cord directly into a 120V 60Hz AC outlet (do not use an isolation transformer for this check). Use a leakage current tester (Fig. 1) or a metering system which complies with Underwriters Laboratories (UL 1409). Measure for current from all exposed metal parts of the cabinet to a known earth ground: particularly, any exposed metal part having a return path to the chassis. Any current measured must not exceed 0.5mA. Any measurement not within the limits outlined above are indicative of a potential shock hazard and corrective action must be taken before returning the unit to the customer.

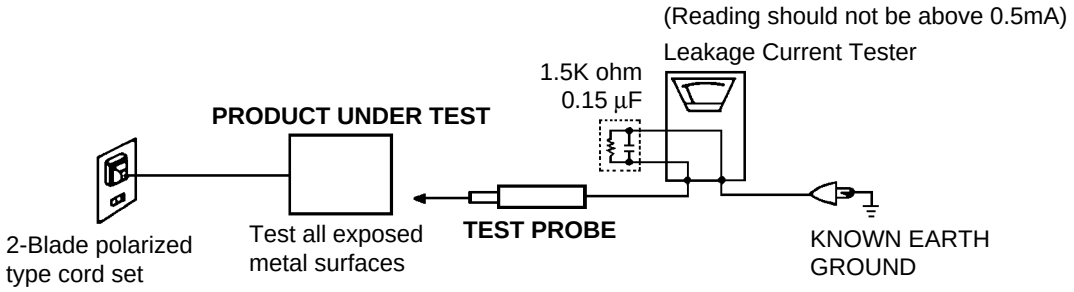


Fig. 1 AC Leakage Test

IMPORTANT SAFEGUARDS

1. **READ INSTRUCTIONS**
   All the safety and operating instructions should be read before the unit is operated.
2. **RETAIN INSTRUCTIONS**
   The safety and operating instructions should be retained for future reference.
3. **HEED WARNINGS**
   All warnings on the unit and in the operating instructions should be adhered to.
4. **FOLLOW INSTRUCTIONS**
   All operating and use instructions should be followed.
5. **CLEANING**
   Unplug this unit from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. **ATTACHMENTS**
   Do not use attachments not recommended by the unit's manufacturer as they may cause hazards.
7. **WATER AND MOISTURE**
   Do not use this unit near water. For example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
8. **ACCESSORIES**
   Do not place this unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury, and serious damage to the unit. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer.

PORTABLE CART WARNING
(symbol provided by RETAC)

S3126A

8A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

9. **VENTILATION**
   Slots and openings in the cabinet and in the back or bottom are provided for ventilation, to ensure reliable operation of the unit, and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the unit on a bed, sofa, rug, or other similar surface. This unit should never be placed near or over a radiator or heat source. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. **POWER SOURCES**
    This unit should be operated only from the type of power source indicated on the rating plate. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For units intended to operate from battery power, or other sources, refer to the operating instructions.
11. **GROUNDING OR POLARIZATION**
    This unit is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug. If your unit is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin, this plug will only fit into a grounding-type power outlet. This too, is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. **POWER-CORD PROTECTION**
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. **LIGHTNING**
    To protect your unit from a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the unit due to lightning and power line surges.
14. **POWER LINES**
    An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.
15. **OVERLOADING**
    Do not overload wall outlets and extension cords, as this can result in a risk of fire or electric shock.
16. **OBJECT AND LIQUID ENTRY**
    Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.

17. OUTDOOR ANTENNA GROUNDING

If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

18. SERVICING

Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

19. DAMAGE REQUIRING SERVICE

Unplug this unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power-supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the unit.
c. If the unit has been exposed to rain or water.
d. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
e. If the unit has been dropped or the cabinet has been damaged.
f. When the unit exhibits a distinct change in performance, this indicates a need for service.

20. REPLACEMENT PARTS

When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original parts.
Unauthorized substitutions may result in fire, electric shock or other hazards.

21. SAFETY CHECK

Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

22. WALL OR CEILING MOUNTING

The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

23. HEAT

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

24. DISC TRAY

Keep your fingers well clear of the disc tray as it is closing. It may cause serious personal injury.

25. CONNECTING

When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.

26. SOUND VOLUME

Reduce the volume to the minimum level before you turn on the product. Otherwise, sudden high volume sound may cause hearing or speaker damage.

27. SOUND DISTORTION

Do not allow the product output distorted sound for a longtime. It may cause speaker overheating and fire.

28. HEADPHONES

When you use the headphones, keep the volume at a moderate level. If you use the headphones continuously with high volume sound, it may cause hearing damage.

29. LASER BEAM

Do not look into the opening of the disc tray or ventilation opening of the product to see the source of the laser beam. It may cause sight damage.

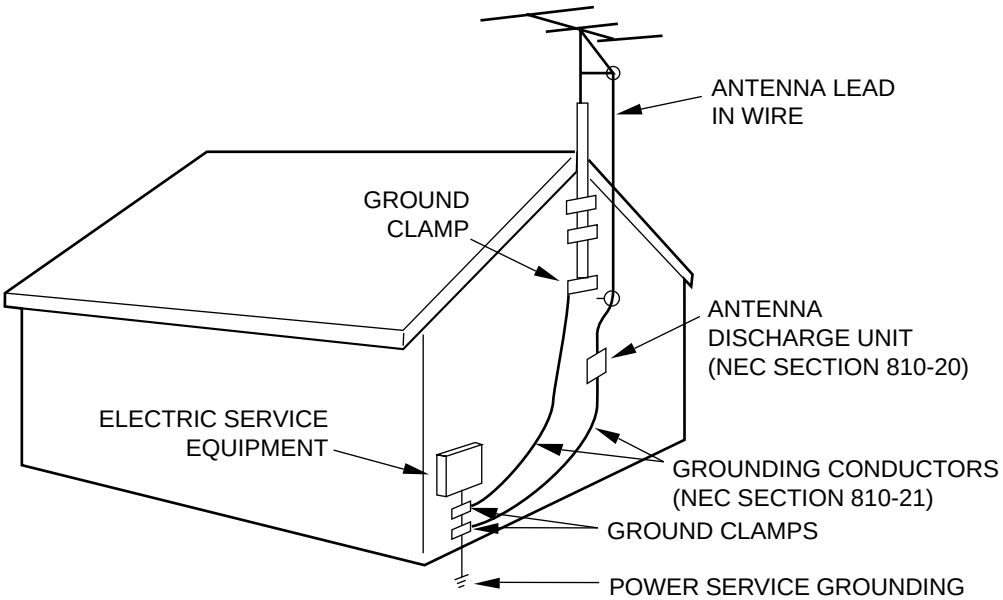
30. DISC

Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.

31. NOTE TO CATV SYSTEM INSTALLER

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

EXAMPLE OF ANTENNA GROUNDING AS PER THE NATIONAL ELECTRICAL CODE



NEC-NATIONAL ELECTRICAL CODE

S2898A

WHEN REPLACING DVD DECK

[When removing the DVD Deck]

Before removing Pick Up PCB and DVD PCB connector, short circuit the position as shown in **Fig. 1** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.

[When installing the DVD Deck]

Remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD PCB connector.

NOTE

- Before your operation, please read “PREPARATION OF SERVICING”.
- Use the Lead Free solder.
- Manual soldering conditions
  - Soldering temperature: 320 ± 20˚C
  - Soldering time: Within 3 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
- When Soldering/Removing of solder, use the draw in equipment over the Pick Up Unit to prevent the Flux smoke from it.

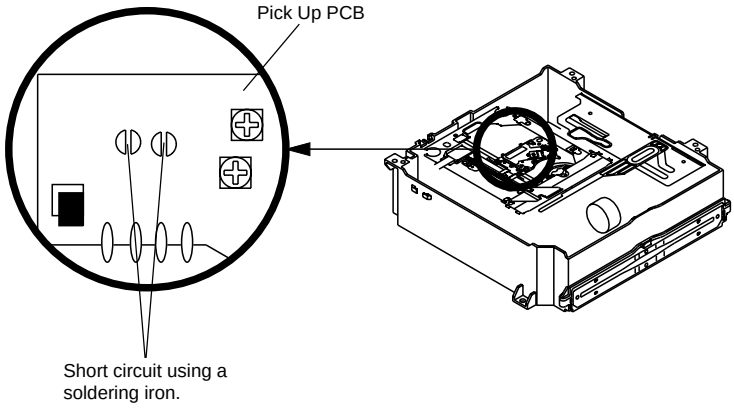


Fig. 1

DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Back Cabinet. **(Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)**
2. Slide the Rack Loading toward the arrow direction by hand to release the lock. **(Refer to Fig. 1)**
3. Take out the Disc from the DVD Deck. Be careful not to scratch on the Disc.

DVD Deck

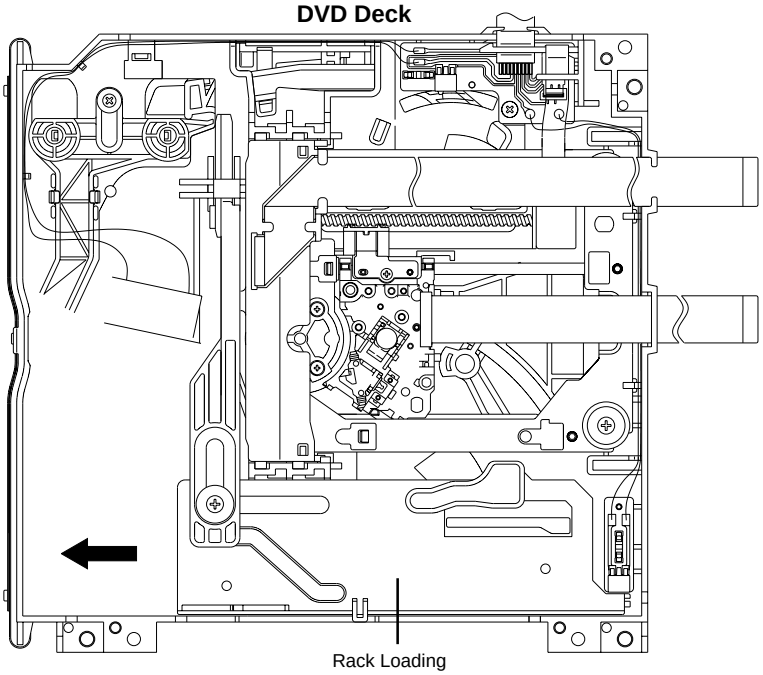


Fig. 1

PARENTAL CONTROL - RATING LEVEL

4 DIGIT PASSWORD CANCELLATION

If the stored 4 digit password in the Rating Level menu needs to be cancelled, please follow the steps below.

1. Turn Unit ON.
2. Press and hold the '7' key on the remote control unit.
3. Simultaneously press and hold the 'STOP' key on the front panel.
4. Hold both keys for more than 3 seconds.
5. The On Screen Display message 'PASSWORD CLEAR' will appear.
6. The 4 digit password has now been cleared

TRAY LOCK

Tray cannot be opened by setting the Tray Lock, please follow the steps below.

1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Press and hold the 'STOP' key on the front panel.
4. Simultaneously press and hold the '9' key on the remote control unit.
5. Hold both keys for more than 3 seconds.
6. The On Screen Display message ' ⌂ ' will appear.
7. The Tray Lock has now been set up.

NOTE: No indications on the screen when the Tray Lock is setting.

To unlock the Tray Lock, please follow the steps below.

1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Press and hold the 'STOP' key on the front panel.
4. Simultaneously press and hold the '9' key on the remote control unit.
5. Hold both keys for more than 3 seconds.
6. The On Screen Display message ' ⌂ ' will appear.
7. The Tray Lock has now been cleared.

NOTE: No indications on the screen when the Tray Lock is setting.

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GENERAL SPECIFICATIONS

G-1	**TV System**	LCD	LCD Size / Visual Size		14.0 inch / 356.4mmV
			LCD Type		Color TFT LCD
			Number of Pixels		640(H) x 480(V)
			View Range	Left/Right	85/85 degree
				Up/Down	85/85 degree
		Color System			NTSC
		Speaker			2 Speaker
			Position		Front
			Size		1.5 x 2.7 inch
			Impedance		16 ohm
		Sound Output	Max		1.5W + 1.5W
			10%(Typical)		---
G-2	**DVD System**	Color System			NTSC
		Disc			DVD, CD-DA, CD-R/RW, Video CD DVD-R/RW (Video Format Only)
		Disc Diameter			120 mm , 80 mm(with Disc Adapter)
		Drive			DSM-1
		Search speed	Fwd		4 step
				Actual	2-45 times (DVD) 4-40 times (CD)
			Rev		4 step
				Actual	2-45 times (DVD) 4-40 times (CD)
		Slow speed	Fwd		1/7 -1/2 times
				Actual	--
			Rev		1/7 -1/2 times
				Actual	--
G-3	**Tuning System**	Broadcasting System			US System M
		Tuner and Receive CH	System		1Tuner
			Destination		US(W/CABLE)
			CH Coverage		2~69, 4A, A-5~A-1, A~I, J~W, W+1~W+84
		Intermediate Frequency	Picture(FP)		45.75MHz
			Sound(FS)		41.25MHz
			FP-FS		4.50MHz
		Preset CH			No
		Stereo/Dual TV Sound			US-Stereo
		Tuner Sound Muting			Yes
G-4	**Signal**	Video Signal	Input Level		1 V p-p/75 ohm
			Output Level		--
			S/N Ratio (Weighted)		--
			Horizontal Resolution at DVD Mode		-- --
		RGB Signal	Output Level		--
		Audio Signal	Input Level		-8.0dBm/50k ohm
			Output Level		--
			Digital Output Level		0.5 V p-p/75 ohm
			S/N Ratio at DVD (Weighted)		--
			Harmonic Distortion		--
			Frequency Response :	at DVD	--
				at Video CD	--
				at SVCD	--
				at CD	--
G-5	**Power**	Power Source	AC		120V, 60Hz
			DC		--
		Power Consumption		at AC Adapter	62W at 120V 60Hz
				at DC	--
			Stand by (at AC Adapter)		1W at 120V 60Hz
			Per Year		-- kWh/Year
		Protector	Power Fuse		Yes
			Safety Circuit		Yes
			IC Protector(Micro Fuse)		Yes
G-6	**Regulation**		Safety		UL/CSA
			Radiation		FCC/IC
			Laser		DHHS

GENERAL SPECIFICATIONS

G-7	**Temperature**			Operation	+5oC ~ +40oC
				Storage	-20oC ~ +60oC
G-8	**Operating Humidity**				Less than 80% RH
G-9	**On Screen Display**	Menu(TV)			Yes
			Menu Type		Icon
			TV Setup		Yes
				Picture	Yes
				Audio	Yes
				Picture Preference	Yes
				Color Temperature	Yes
				Auto Dimmer	No
			CH Tuning		Yes
				TV/CABLE	Yes
				Add/Delete	Yes
				Auto CH Memory	Yes
			V-Chip		Yes
			Language		Yes
			Clock Set		No
			Pin Code Registration		No
			Sound System		No
			AV2 Output Source		No
		Control Level			Yes
				Volume	Yes
				Brightness	Yes
				Contrast	Yes
				Color	Yes
				Tint	Yes
				Sharpness	Yes
				Bass	Yes
				Treble	Yes
				Balance	Yes
		Stereo			Yes
		Pin Code			No
		CH/AV/DVD			Yes
		Component			Yes
		Hotel Lock			No
		CH Label			No
		Sleep Timer			Yes
		Caption / Text			Yes
		Volume			Yes
		Sound Mute			Yes
		V-chip Rating			Yes

GENERAL SPECIFICATIONS

G-10	**On Screen Display**	Menu (DVD)			Yes
			Menu Type		Character
			Language		Yes
				Menu	Yes
				Subtitle	Yes
				Audio	Yes
			Picture		Yes
				TV Screen Size(4:3)	Yes
				OSD Display On/Off	Yes
				JPEG Interval	Yes
				Select Files	Yes
			Sound		Yes
				DRC (Dynamic Range Control)	Yes
				dts Decode	No
				Output(5.1ch/ 2ch)	No
				Surround On/Off	No
				Center On/Off	No
				Sub Woofer On/Off	No
			Parental		Yes
				Password Lock/ Un Lock	Yes
				Rating Level	Yes
			Other		Yes
				OSD Language(Set up Language)	Yes
				Output(RGB/Composite)	No
			Eject		Yes
			No disc		Yes
			Reading		Yes
			Play		Yes
			Still/Pause		Yes
			Stop		Yes
			Prohibit Mark		Yes
			Step		Yes
			Skip(>>|)		Yes
			Skip(|<<)		Yes
			Random		Yes (CD, VIDEO CD, MP3, WMA, JPEG)
			Repeat		Yes
			Slow+		Yes
			Slow-		Yes
			Search+		Yes
			Search-		Yes
			Jump		Yes
			Resume		Yes
			Title No.		Yes
			Chapter No.		Yes
			Track No.		Yes
			Time		Yes
			Sub Title No.		Yes
			Angle No.		Yes
			Vocal On/Off		Yes
			Audio No.		Yes
			Audio Stereo L/R		Yes (VIDEO CD)
			Zoom		Yes
			Marker No.		No
			Program Play Back		Yes (CD, VIDEO CD, MP3, WMA, JPEG)
			Surround On/Off		No
			Screen Saver		No
			MP-3, WMA, JPEG	Folder Name	Yes
				File Name	Yes
				File No	Yes
				Time	Yes (MP3, WMA Only)
				Track No	Yes
G-11	**OSD Language**	(TV)			English, French, Spanish
		(DVD)			English, French, Spanish
G-12	**Clock and Timer**	Sleep Timer	Max Time		120 Min
			Step		10 Min
		On/Off Timer	Program(On Timer / Off Timer)		No
		Wake Up Timer			No
		Timer Back-up (at Power Off Mode)		more than	-- Min Sec

GENERAL SPECIFICATIONS

G-13	**Remote Control**	Unit		RC-LB
		Glow in Dark Remocon		Yes
		Remocon Format		ORION
		Format		NEC
		Custom Code		71-8E h
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		47 Key
		Keys	Power	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			Play	Yes
			Stop	Yes
			Search+	Yes
			Search-	Yes
			Skip+	Yes
			Skip-	Yes
			Slow+	Yes
			Slow-	Yes
			Pause/Still/Step	Yes
			Recall	Yes
			TV/DVD	Yes
			Cancel	Yes
			Audio Select	Yes
			Angle	Yes
			Subtitle	Yes
			Top Menu	Yes
			Setup/ Menu	Yes
			DVD Menu	Yes
			Return	Yes
			Up / CH Up	Yes
			Down / CH Down	Yes
			Vol Down	Yes
			Vol Up	Yes
			Left	Yes
			Right	Yes
			Enter	Yes
			Play Mode	Yes
			Closed Caption	Yes
			Input Select	Yes
			Repeat A-B	Yes
			Zoom/ Quick View	Yes
			Mute	Yes
			Eject	Yes
			Sleep	Yes
			Jump	Yes
			Game	Yes
			Freeze frame	No

GENERAL SPECIFICATIONS

G-14	**Features (TV)**	CABLE		Yes
		Auto Shut Off		Yes
		Auto CH Memory		Yes
		V-Chip		Yes
			Type	USA Type
		Auto Search		No
		SAP		Yes
		PC Monitor Input		No
		S-Video Input		Yes
		Game Position		Yes
		FM Transmitter		No
		Surround		Yes
		Stable Sound		No
		Energy Star		Yes
		Closed Caption		Yes
		Comb Filter		Yes
				3D
		Power On Memory		No
		Available Scan Rates	(Component)	480i/480p
		Freeze frame		No
	Features (DVD)	Tray Lock		Yes
		WMA		Yes
		JPEG		Yes
		Video CD Playback		Yes
		SVCD Playback		No
			Overlay Graphics And Text	No
			Command List	No
			Entry Point Jump	No
		MP3 Playback		Yes
		Digital Out	(Dolby Digital)	Yes
			(MPEG)	Yes
			(PCM)	Yes
			(DTS)	Yes
		Down Mix Out	(Dolby Digital)	Yes
			(DTS)	No
		3D Surround		No
		Screen Saver		No
		Audio DAC		192kHz / 24bit
G-15	**Accessories**	Owner's Manual	Language	English/French
			w/Guarantee Card	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	--
			Terminal	--
		Loop Antenna		No
			Terminal	--
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Dew/AHC Caution Sheet		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-4 x 2 pcs
			OEM Brand	No
		AC Adapter		Yes
		AC Cord (for AC Adapter)		Yes
		AV Cord (2Pin-1Pin)		No
		Registration Card		Yes
		300 ohm to 75 ohm Antenna Adapter		Yes
		Sheet Information (Return)		Yes(USA version, Canada version)

GENERAL SPECIFICATIONS

G-16	**Interface**	Switch	Top	Power (Tact)	Yes
				Channel Up	Yes
				Channel Down	Yes
				Volume Up	Yes
				Volume Down	Yes
				Play	Yes
				Eject	Yes
				Skip+, Search+	Yes
				Skip-, Search-	Yes
				Still/Pause	No
				Stop	Yes
				Main Power SW	No
				Input Select	No
			Rear	Main Power SW	No
		Indicator		Power	Yes (Green)
				Stand-by	No
				On Timer	No
		Terminals	Rear	Video Input 1	RCA x 1
				Audio Input 1	RCA x 2 (Stereo)
				S- Input 1	Yes
				Video Output	No
				Audio Output	No
				Component	Yes
				Euro Scart(21Pin)	No
				PC Monitor Input	No
				Digital Audio Output	Coaxial (DVD Only)
				DC Jack (Center +)	Yes
				VHF/UHF Antenna Input	F Type
				AC Outlet	No
			Side	Video Input 2	RCA x 1
				Audio Input 2	RCA x 2 (Stereo)
				Other Terminal	Headphone
G-17	**Set Size**			Approx. W x D x H (mm)	437 x 184 x 331.5
				w/o Handle, Stand Approx. W x D x H (mm)	437 x 85.5 x 289
G-18	**Weight**			Net (Approx.)	5.5kg (12.1 lbs)
				Net w/o Handle, Stand (Approx.)	4.5kg (9.9 lbs)
				Gross (Approx.)	7.5kg (16.5 lbs)
G-19	**Carton**		Master Carton		No
				Content	--- Sets
				Material	--- / ---
				Dimensions W x D x H(mm)	---
				Description of Origin	---
			Gift Box	Material	Single/White
				W/Color Photo Label	No
				Dimensions W x D x H(mm)	518x411x263
				Description of Origin	Yes
			Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
				Height (cm)	80
			Container Stuffing (40' container)		1016 Sets/40' container
G-20	**Material**		Cabinet	Front	PS 94V0 DECABROM
				Rear	PS 94V0 DECABROM
				Jack Panel	--
			PCB	Non-Halogen Demand	No
				Eyelet Demand	No
G-21	**Environment**		Environmental standard requirement (by buyer)		Green procurement of TOSHIBA
				Pb-free	Phase3 (Phase3A)
G-22	**AC Power Adapter**				Provided Accessories
		Power Requirement		AC	120V 60Hz
		Power Consumption		at AC	65 W
		DC Output			DC Jack : DC12V 4.5A
		Dimension		Approx. W x D x H (mm)	150 x 72 x 43
		Weight		Approx.	450g

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

1-1: HINGE ASS'Y (Refer to Fig. 1-1)

1. Remove the 2 screws ①.
2. Remove the Hinge Cover in the direction of arrow (A).
3. Remove the 4 screws ②.
4. Remove the Stand Block in the direction of arrow (B).
5. Remove the 4 screws ③.
6. Remove the Hinge Ass'y in the direction of arrow (C).
7. Remove the 4 screws ④.
8. Remove the Stand in the direction of arrow (C).

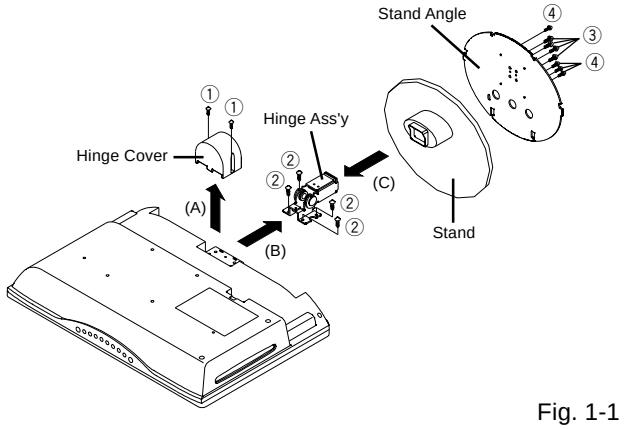


Fig. 1-1

1-2: BACK CABINET (Refer to Fig. 1-2)

1. Remove the 7 screws ①.
2. Remove the Back Cabinet in the direction of arrow.

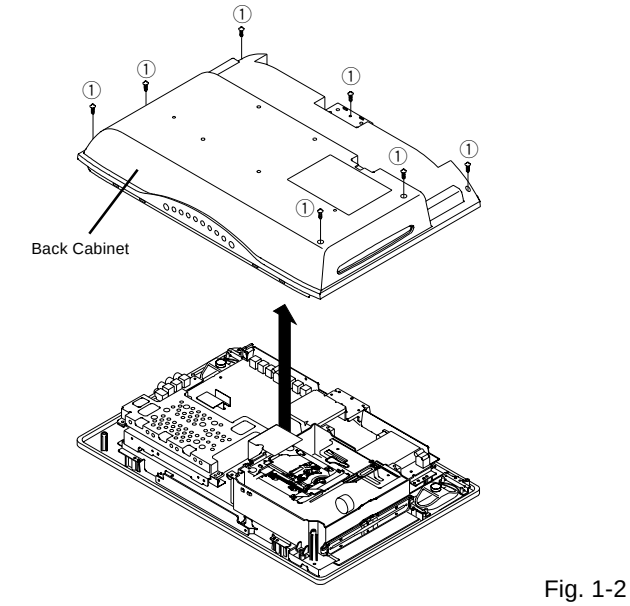


Fig. 1-2

1-3: BACK ANGLE (Refer to Fig. 1-3)

1. Remove the 3 screws ①.
2. Remove the screw ②.
3. Remove the 2 screws ①.
4. Remove the Jack Plate and Jack Shield in the direction of arrow (A).
5. Remove the 3 screws ④.
6. Remove the Back Angle in the direction of arrow (B).

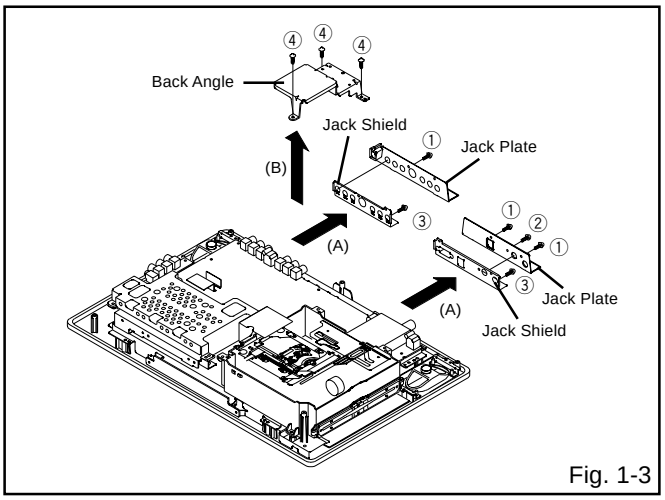


Fig. 1-3

1-4: DVD PCB (Refer to Fig. 1-4)

1. Short circuit the position shown in **Fig. 1-4** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.
2. Remove the 4 screws ①.
3. Remove the FFC Shield and DVD Shield.
4. Disconnect the following connectors: **(CP701, CP2301, CP2302, CP2601 and CP3804)**.
5. Remove the DVD PCB in the direction of arrow.

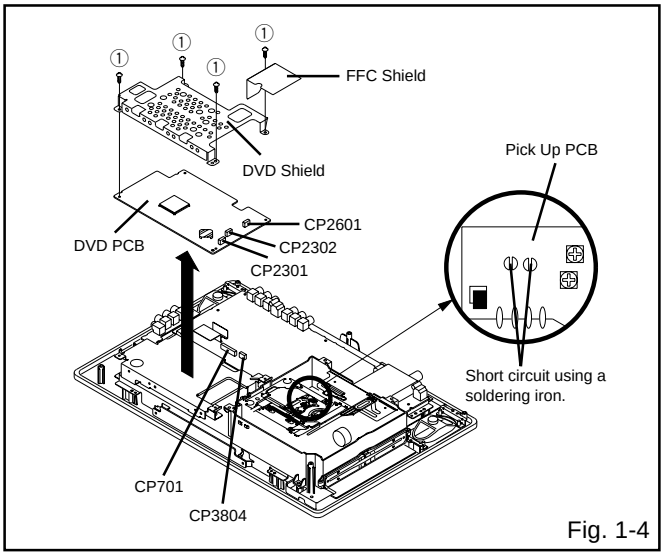


Fig. 1-4

DISASSEMBLY INSTRUCTIONS

NOTE

1. Before your operation, please read “PREPARATION OF SERVICING”.
2. Use the Lead Free solder.
3. Manual soldering conditions
   - Soldering temperature: 320 ± 20˚C
   - Soldering time: Within 3 seconds
   - Soldering combination: Sn-3.0Ag-0.5Cu
4. When Soldering/Removing of solder, use the drawing equipment over the Pick Up Unit to keep the Flux smoke away from it.
5. When installing the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD PCB connector.

1-5: DVD DECK (Refer to Fig. 1-5)

1. Remove the 2 screws ①.
2. Remove the 2 screws ②.
3. Remove the DVD Deck in the direction of arrow.

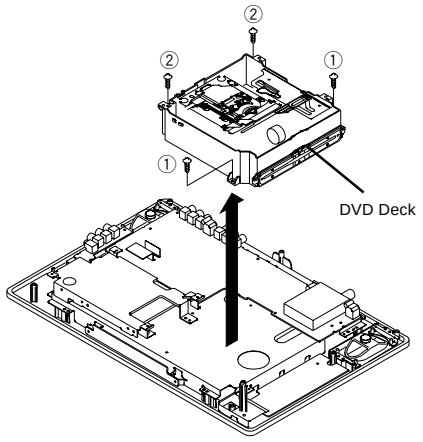


Fig. 1-5

1-6: LCD PCB (Refer to Fig. 1-6)

1. Remove the screw ①.
2. Remove the MPEG Shield.
3. Disconnect the following connectors:
   (CP102, CP103, CP104, CP801 and CP3805).
4. Remove the 4 screws ②.
5. Remove the PCB Angle in the direction of arrow (A).
6. Remove the 4 screws ③.
7. Remove the LCD PCB in the direction of arrow (B).

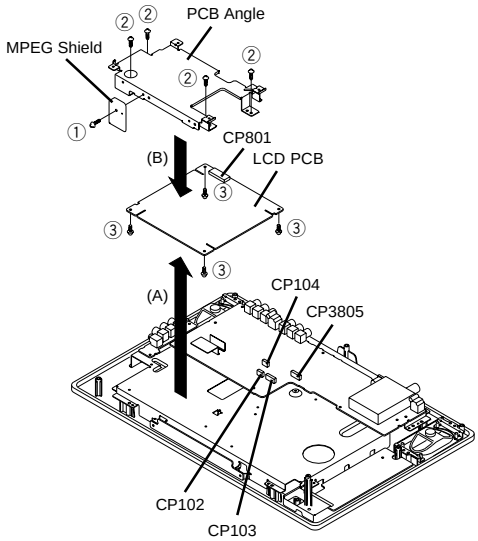


Fig. 1-6

1-7: LCD PCB (Refer to Fig. 1-7)

1. Disconnect the following connectors:
   (CP101, CP705, CP1001, CP2201 and CP3803).
2. Remove the 6 screws ①.
3. Remove the LCD PCB in the direction of arrow.

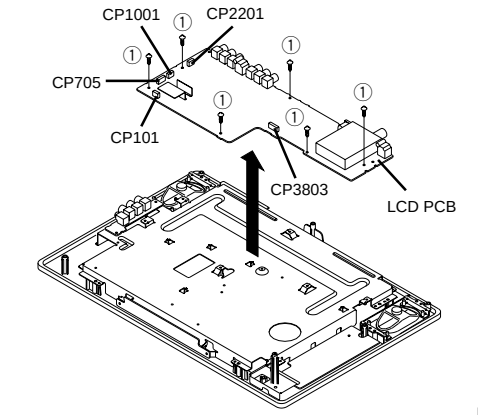


Fig. 1-7

1-8: SIDE JACK PCB (Refer to Fig. 1-8)

1. Remove the 3 screws ①.
2. Remove the Jack Plate, Jack Shield and Side Jack PCB in the direction of arrow.

DISASSEMBLY INSTRUCTIONS

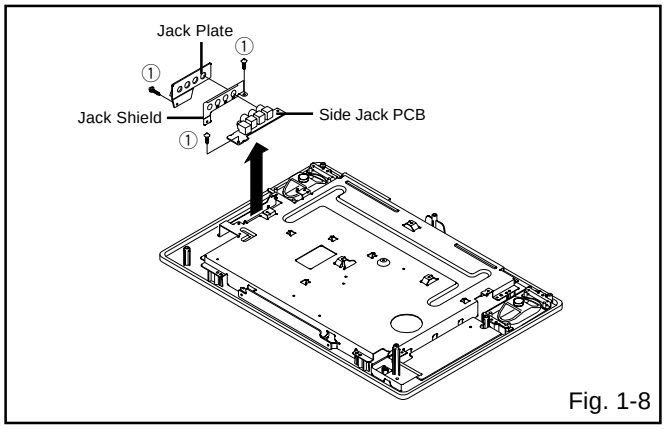


Fig. 1-8

1-9: LCD COVER/LCD PANEL/OPERATION PCB (Refer to Fig. 1-9)

1. Remove the 2 screws ①.
2. Remove the Cover Shield in the direction of arrow (A).
3. Remove the 6 screws ②.
4. Remove the LCD Block in the direction of arrow (B).
5. Remove the 2 screws ③.
6. Remove the Operation PCB in the direction of arrow (C).
7. Remove the 4 screws ④.
8. Remove the LCD Panel in the direction of arrow (D).

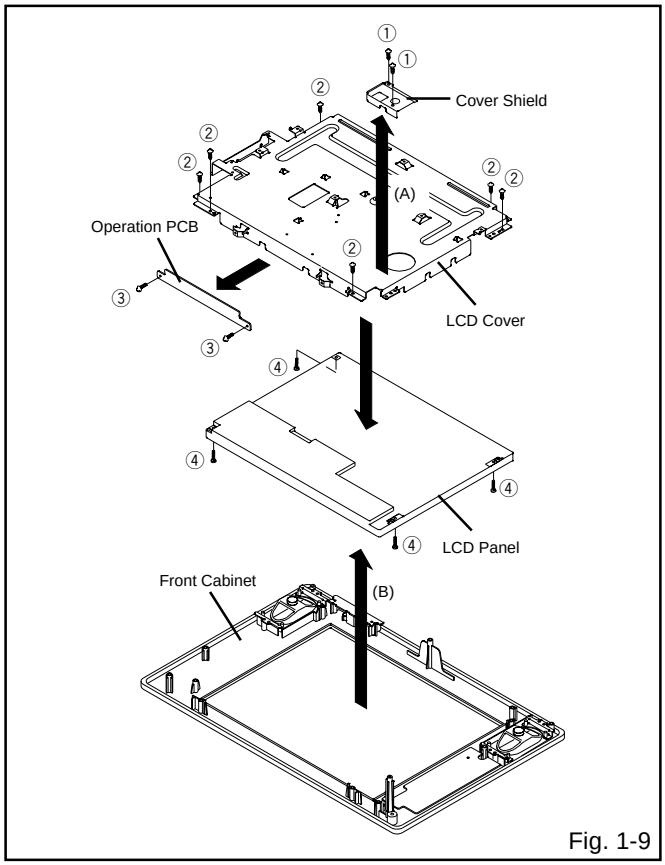


Fig. 1-9

1-10: REMOCON PCB/BACK LIGHT PCB (Refer to Fig. 1-10)

1. Remove the 2 screws ①.
2. Remove the Remocon PCB in the direction of arrow (A).
3. Remove the 2 screws ②.
4. Remove the Back Light PCB in the direction of arrow (B).

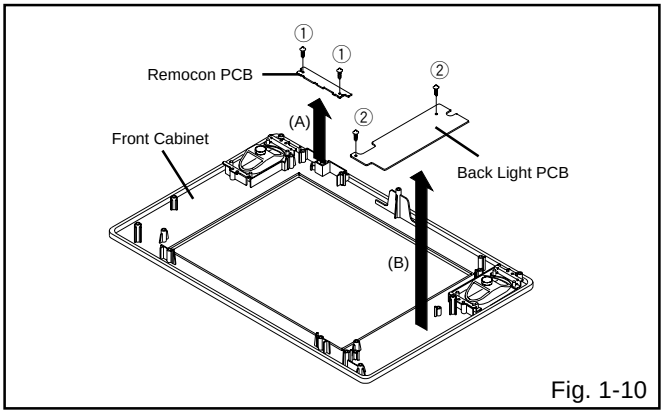


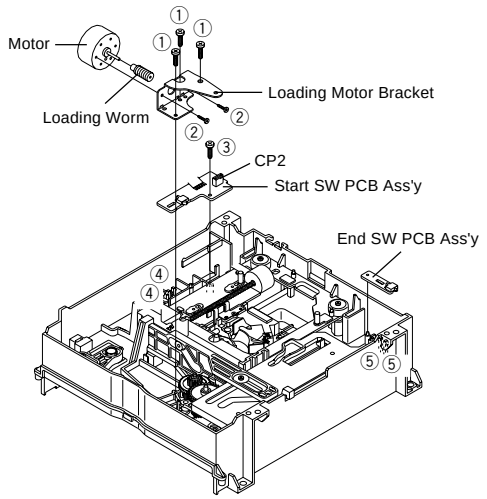
Fig. 1-10

DISASSEMBLY INSTRUCTIONS

2. REMOVAL OF DVD DECK PARTS

2-1: LOADING MOTOR ASS'Y/START SW PCB ASS'Y/ END SW PCB ASS'Y (Refer to Fig. 2-1-A)

1. Remove the 3 screws ①.
2. Remove the Loading Motor Ass'y.
3. Remove the 2 screws ②.
4. Remove the Motor and Loading Worm.
5. Disconnect the following connector: **(CP2)**.
6. Remove the screw ③.
7. Unlock the 2 supports ④ and remove the Start SW PCB Ass'y.
8. Unlock the 2 supports ⑤ and remove the End SW PCB Ass'y.



• Screw Torque: 1 ± 0.2kgf•cm

Fig. 2-1-A

NOTE

1. In case of the Loading Worm installation, check if the value of the Fig. 2-1-B is correct.
2. When installing the wire, install it correctly as Fig. 2-1-B.

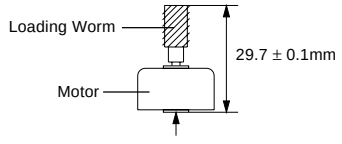


Fig. 2-1-B

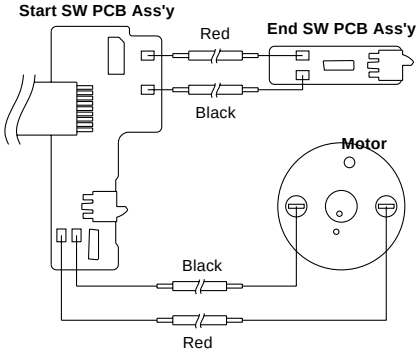
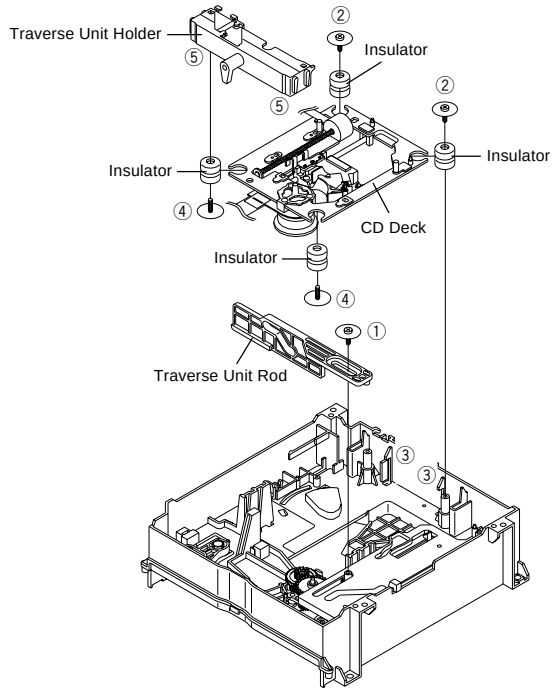


Fig. 2-1-C

2-2: TRAVERSE UNIT ROD/TRAVERSE UNIT HOLDER/ CD DECK/INSULATOR (Refer to Fig. 2-2)

1. Remove the screw ①.
2. Remove the Traverse Unit Rod.
3. Remove the 2 screws ③.
4. Unlock the 2 supports ④ and remove the CD Deck Block.
5. Remove the 2 screws ⑤.
6. Unlock the 2 supports ⑥ and remove the Traverse Unit Holder.
7. Remove the 4 Insulators.

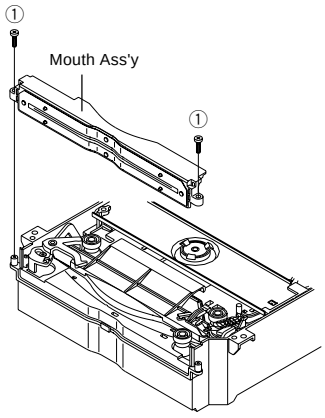


• Screw Torque: 3 ± 0.5kgf•cm

Fig. 2-2

2-3: MOUTH ASS'Y (Refer to Fig. 2-3)

1. Remove the 2 screws ①.
2. Remove the Mouth Ass'y.



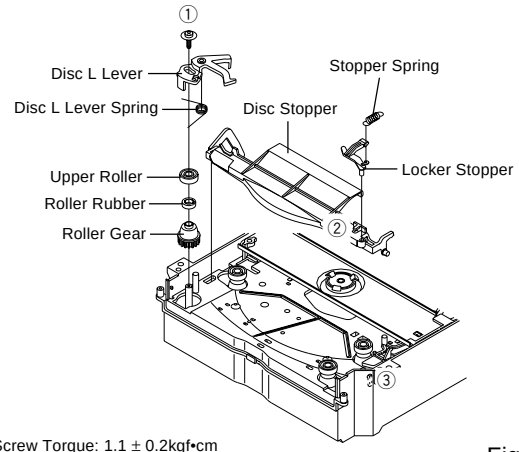
• Screw Torque: 0.8 ± 0.2kgf•cm

Fig. 2-3

DISASSEMBLY INSTRUCTIONS

2-4: DISC L LEVER/DISC STOPPER/LOCKER STOPPER/ ROLLER GEAR (Refer to Fig. 2-4-A)

1. Remove the screw ①.
2. Remove the Disc L Lever and Disc L Lever Spring.
3. Remove the Stopper Spring.
4. Unlock the support ② and remove the Locker Stopper.
5. Unlock the support ③ and remove the Disc Stopper.
6. Remove the Upper Roller, Roller Rubber and Roller Gear.



• Screw Torque: 1.1 ± 0.2kgf•cm

Fig. 2-4-A

NOTE

1. In case of the Upper Roller installation, install correctly as Fig. 2-4-B.

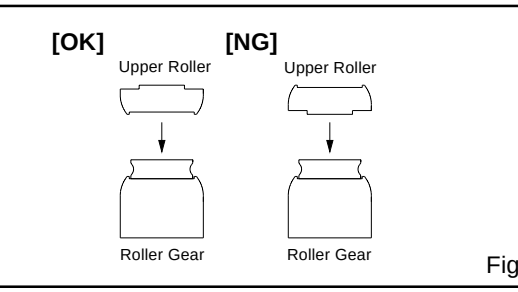


Fig. 2-4-B

2-5: RACK LOADING/RACK GEAR/GUIDE ARM SPRING/MID RACK GEAR (Refer to Fig. 2-5)

1. Remove the Guide Arm Spring.
2. Unlock the 3 supports ① and remove the Rack Loading.
3. Remove the Rack Gear and Mid Rack Gear.

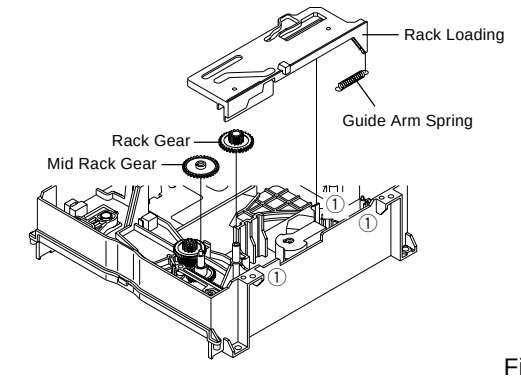
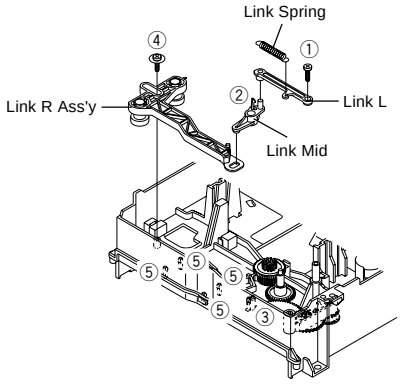


Fig. 2-5

2-6: LINK R ASS'Y/LINK L/LINK MID/LINK SPRING (Refer to Fig. 2-6)

1. Remove the screw ①.
2. Remove the Link Spring.
3. Unlock the support ② and remove the Link L.
4. Unlock the support ③ and remove the Link Mid.
5. Remove the screw ④.
6. Unlock the 4 supports ⑤ and remove the Link R Ass'y.

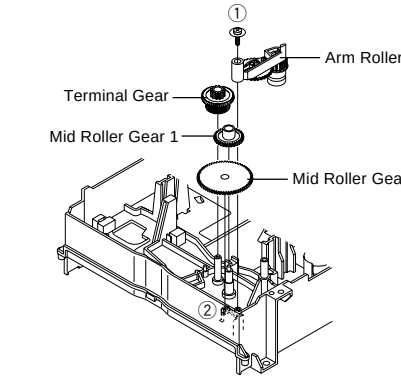


• Screw Torque: 0.7 ± 0.1kgf•cm (Screw ①)
• Screw Torque: 1.5 ± 0.2kgf•cm (Screw ④)

Fig. 2-6

2-7: ARM ROLLER ASS'Y/MID ROLLER 1/2 GEAR/ TERMINAL GEAR (Refer to Fig. 2-7)

1. Remove the screw ①.
2. Remove the Arm Roller Ass'y.
3. Remove the Terminal Gear and Mid Roller Gear 1.
4. Unlock the support ② and remove the Mid Roller Gear 2.



• Screw Torque: 1.5 ± 0.2kgf•cm

Fig. 2-7

DISASSEMBLY INSTRUCTIONS

2-8: CLAMPER ASS'Y/DISC GUIDE ARM/DISC R LEVER (Refer to Fig. 2-8-A)

1. Unlock the support ① and remove the Clamper Ass'y.
2. Unlock the support ② and remove the Disc Guide Arm.
3. Unlock the support ③ and remove the Disc R Lever.

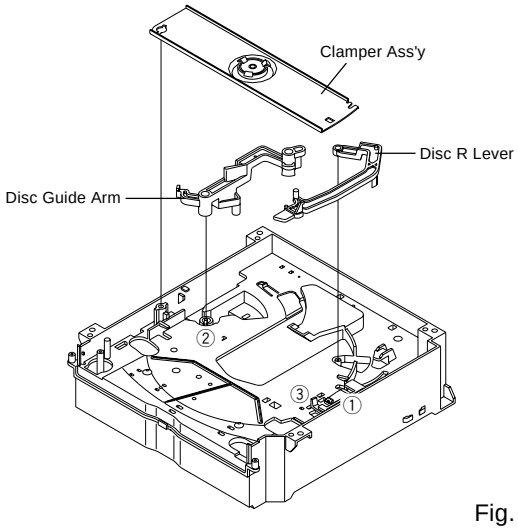


Fig. 2-8-A

NOTE

1. When installing the Clamper Ass'y, check if the Clamper Ass'y is locked correctly as Fig. 2-8-B.

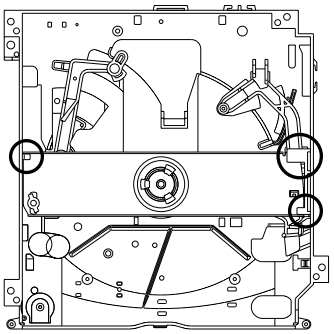


Fig. 2-8-B

DISASSEMBLY INSTRUCTIONS

3. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put the Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 3-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

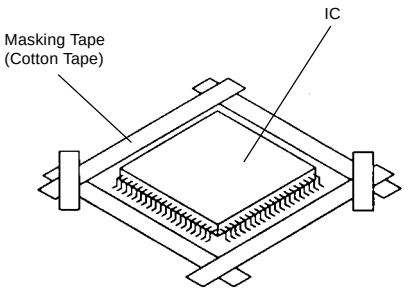


Fig. 3-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 3-2.)**

   NOTE

   Do not add the rotating and the back and forth directions force on the IC, until IC can move back and forth easily after desoldering the IC leads completely.

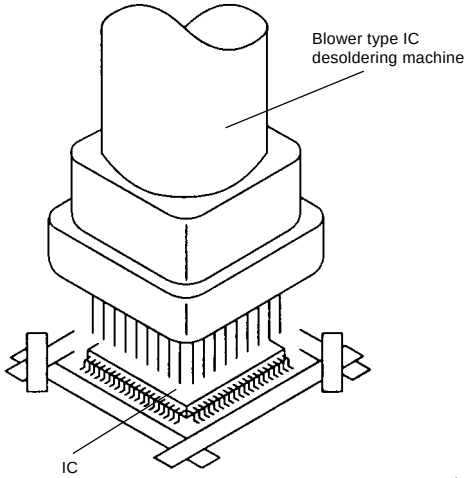


Fig. 3-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 3-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

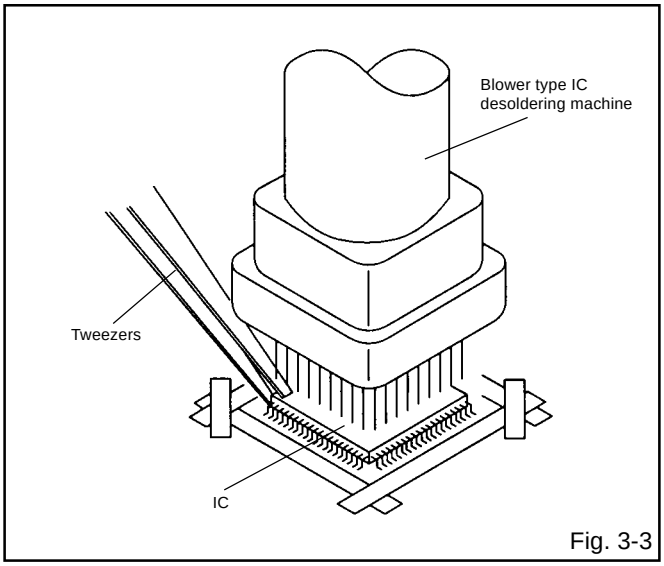


Fig. 3-3

4. Peel off the Masking Tape.
5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 3-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

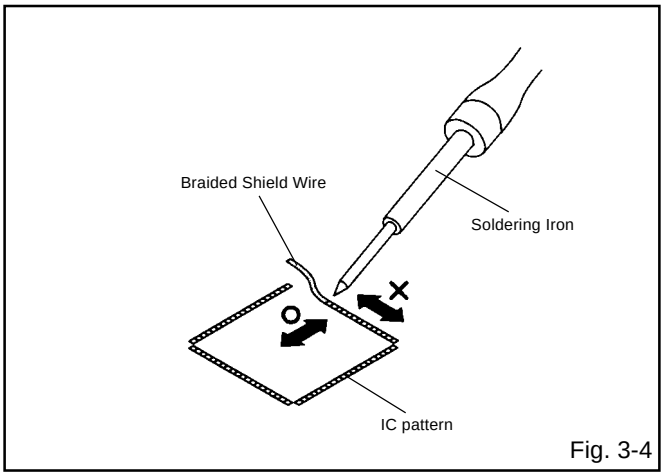


Fig. 3-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 3-5.)**

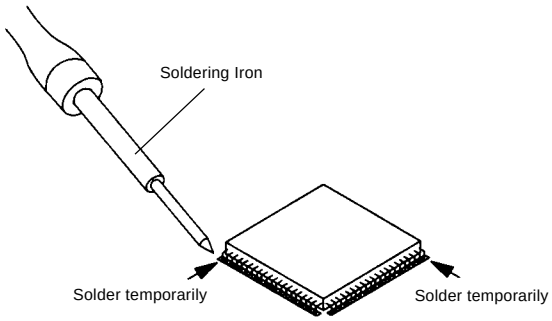


Fig. 3-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 3-6.)**

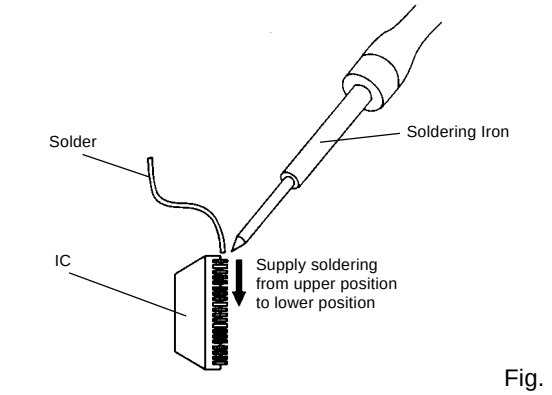


Fig. 3-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 3-7.)**

   NOTE

   Do not absorb the solder to excess.

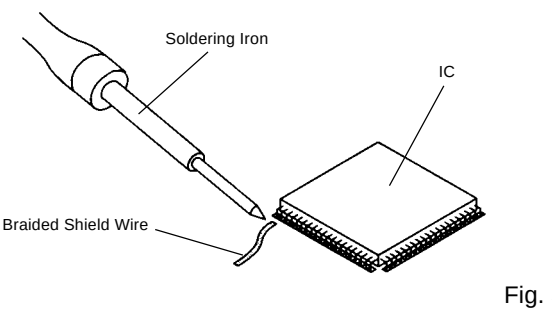


Fig. 3-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 3-8.)**

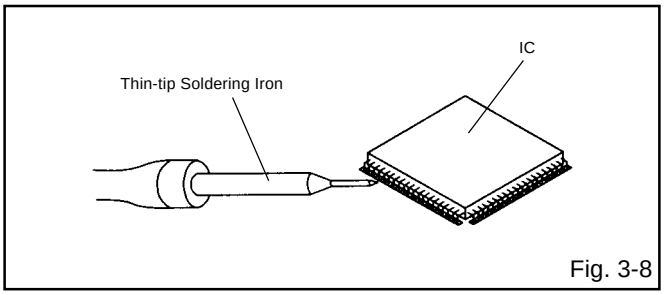


Fig. 3-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, be always sure to replace the IC in this case.

SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than the standard time in the appropriate condition. (See below chart.)

Set Condition	Set Key	Remocon Key	Standard Time	Operations
TV mode	VOL. DOWN (Minimum)	0	1 sec.	Releasing of V-CHIP PASSWORD.
TV mode	VOL. DOWN (Minimum)	1	1 sec.	Initialization of factory data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
DVD mode (No disc)	VOL. DOWN (Minimum)	4	1 sec.	Initialization of factory DVD data. NOTE: The function will only work without the setting of DVD disc at DVD mode.
DVD mode (No disc)	VOL. DOWN (Minimum)	5	1 sec.	DVD Write mode. Refer to the “RE-WRITE FOR DVD FIRMWARE”. NOTE: The function will only work without the setting of DVD disc at DVD mode.
DVD mode (Stop)	STOP	1	3 sec.	Check for the firmware version. Refer to the “RE-WRITE FOR DVD FIRMWARE”. NOTE: Do not use this for the normal servicing.
TV mode	VOL. DOWN (Minimum)	6	1 sec.	POWER ON total hours are displayed on the screen. Refer to the "PREVENTIVE CHECKS AND SERVICE INTERVALS" (CONFIRMATION OF HOURS USED). Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	9	1 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).
DVD mode (No disc)	STOP	7	3 sec.	Releasing of PARENTAL LOCK. Refer to the “PARENTAL CONTROL - RATING LEVEL”. NOTE: The function will only work without the setting of DVD disc at DVD mode.
DVD mode (STOP)	STOP	9	3 sec.	Tray cannot be opened. Refer to the “TRAY LOCK”. NOTE: No indications on the screen when the Tray Lock is setting.

CONFIRMATION OF HOURS USED

POWER ON total hours can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 1 second.
4. After the confirmation of using hours, turn off the power.

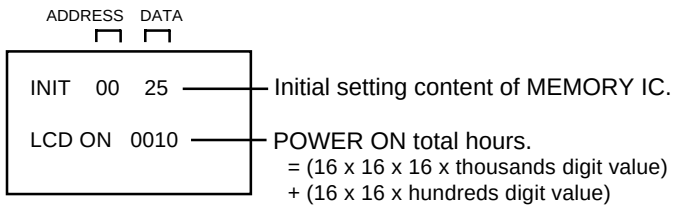
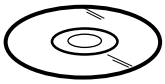


FIG. 1

SERVICING FIXTURES AND TOOLS

JG176 Up-Date Disc



Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176052	Up-Date Disc	Up-Date of the Firmware

RE-WRITE FOR DVD FIRMWARE

1. Turn on the power, and set the DVD mode.

2. Confirm that the “No Disc” will be appeared on the screen.

3. Press both VOL. DOWN button on the set and Channel button **(5)** on the remote control for more than 1 second.

4. Press VOL. UP/DOWN button on the unit to check if all the keys on the unit do not function.
   NOTE: To check if DVD Write mode is set.
   When inserting Up-Date Disc at Non DVD Write mode, the read error will happen.

5. Insert the Up-Date Disc. **(Refer to SERVICING FIXTURE AND TOOLS)**

6. Automatic read will start and "Firmware upgrade Please Wait" will be displayed on the screen.
   At this time, the horizontal noise lines may appear. But no problem.
   NOTE: Do not turn off the unit on the way or operate the keys on the unit and remocon.
   Up-Date error will happen and can not be done with the Up-Date of Up-Date Disc.

7. After the Up-Date, Logo screen will appear.

8. Unplug the AC cord, then plug it in.

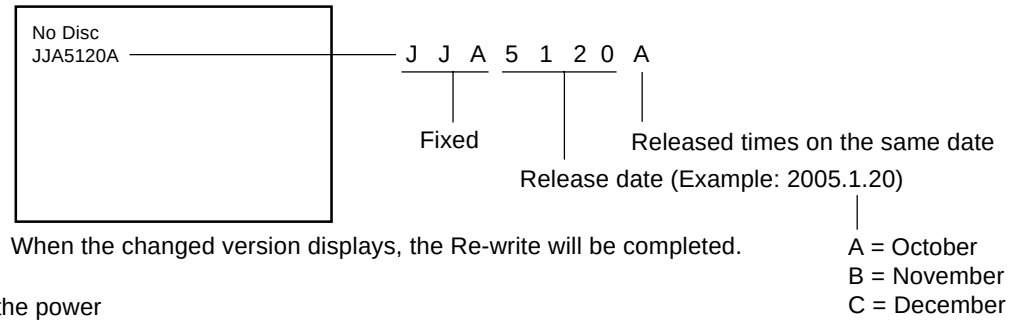
After the write, set to the initializing of shipping.

9. Turn on the power, and set the DVD mode.
10. Press both VOL. DOWN button on the set and Channel button **(4)** on the remote control for more than 1 second.
    The "INITIALIZE 5 ---> COMPLETE" will appear on the screen.

11. Then unplug the AC cord, and plug it in.

CHECK FOR THE FIRMWARE VERSION

12. Turn on the power, and set the DVD mode.
13. Press both Channel button **(1)** on the remote control and the STOP button on the set for more than 3 seconds.
    Firmware version will be displayed on the top left of the screen.



When the changed version displays, the Re-write will be completed.

14. Turn off the power

WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

NOTE: No need to set data for between INI 10 and INI 4F due to the adjustment value.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	25	15	77	61	00	98	02	69	89	40	45	B3	00	A5	19	91
50	00	01	20	00	00	00	17	00	00	00	05	00	00	00	---	---

Table 1

1. Turn on the POWER, and set to the TV mode.
2. Enter DATA SET mode by setting VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 1 second. ADDRESS and DATA should appear as FIG 1.

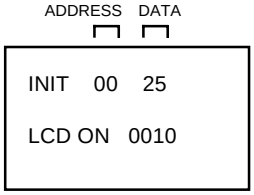


FIG. 1

4. ADDRESS is now selected and should "blink". Using the VOL. UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
5. Press ENTER to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using VOL. UP/DOWN button until required DATA value has been selected.
7. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 7 until all data has been checked.
9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

10. Turn on the POWER, and set to the TV mode.
11. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 1 second.
12. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. BEFORE MAKING ELECTRICAL ADJUSTMENTS

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damage to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. AC Voltmeter
3. Pattern Generator
4. Multi-Sound Signal Generator

On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 1 second to appear the adjustment mode on the screen as shown in **Fig. 1-1**.

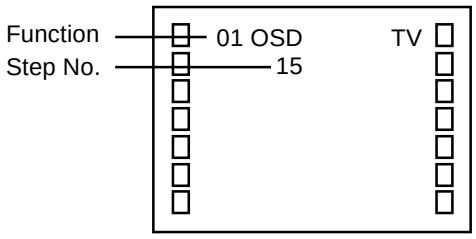


Fig. 1-1

3. Use the Channel UP/DOWN button or Channel button **(1-0)** on the remote control to select the options shown in **Fig. 1-2**.
4. Press the TV MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for AV mode, press the INPUT SELECT button on the remote control to set to the AV mode. And, to display the adjustment screen for DVD mode, press the TV/DVD button on the remote control to set to the DVD mode. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 1 second.

NO.	FUNCTION	NO.	FUNCTION
01	OSD	38	DRI1 W
07	RCUT M	39	DRI2 W
08	GCUT M	40	MD6 W
09	BCUT M	41	DTHON W
10	DRI1 M	42	DRREF W
11	DRI2 M	43	RCUT2 W
12	MD6 M	44	GCUT2 W
13	DTHON M	45	BCUT2 W
14	DRREF M	46	GAINR W
15	RCUT2 M	47	GAING W
16	GCUT2 M	48	GAINB W
17	BCUT2 M	49	BRI CEN
18	GAINR M	50	BRI MAX
19	GAING M	51	BRI MIN
20	GAINB M	52	CON CEN
21	RCUT C	53	CON MAX
22	GCUT C	54	CON MIN
23	BCUT C	55	COL CEN
24	DRI1 C	56	COL MAX
25	DRI2 C	57	COL MIN
26	MD6 C	58	TIN CEN
27	DTHON C	59	TIN MAX
28	DRREF C	60	TIN MIN
29	RCUT2 C	61	SHA CEN
30	GCUT2 C	62	SHA MAX
31	BCUT2 C	63	SHA MIN
32	GAINR C	64	DIM
33	GAING C	65	CR GAIN
34	GAINB C	66	CB GAIN
35	RCUT W	67	CR OFFS
36	GCUT W	68	CB OFFS
37	BCUT W		

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CONTRAST MAX

1. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(53)** on the remote control to select "CONT MAX".
2. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "56".
3. Receive a broadcast and check if the picture is normal.
4. Press the INPUT SELECT button on the remote control to set to the AV mode.
5. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(53)** on the remote control to select "CONT MAX".
6. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "56".
7. Receive a broadcast and check if the picture is normal.

ELECTRICAL ADJUSTMENTS

2-2: WHITE BALANCE CS

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set in Aging Test for more than 5 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Press the TV/DVD button on the remote control to set to the CS mode.
5. If the picture is too much green.Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(67)** on the remote control to select “CR OFFS”.
6. Adjust the VOL. UP/DOWN button on the remote control to select the step up.
7. If the picture is too much red.Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(68)** on the remote control to select “CB OFFS”.
8. Adjust the VOL. UP/DOWN button on the remote control to select the step down.
9. Perform the above adjustments 5 and 6 until the white color is achieved.

2-3: Confirmation of Fixed Value (Step No.)

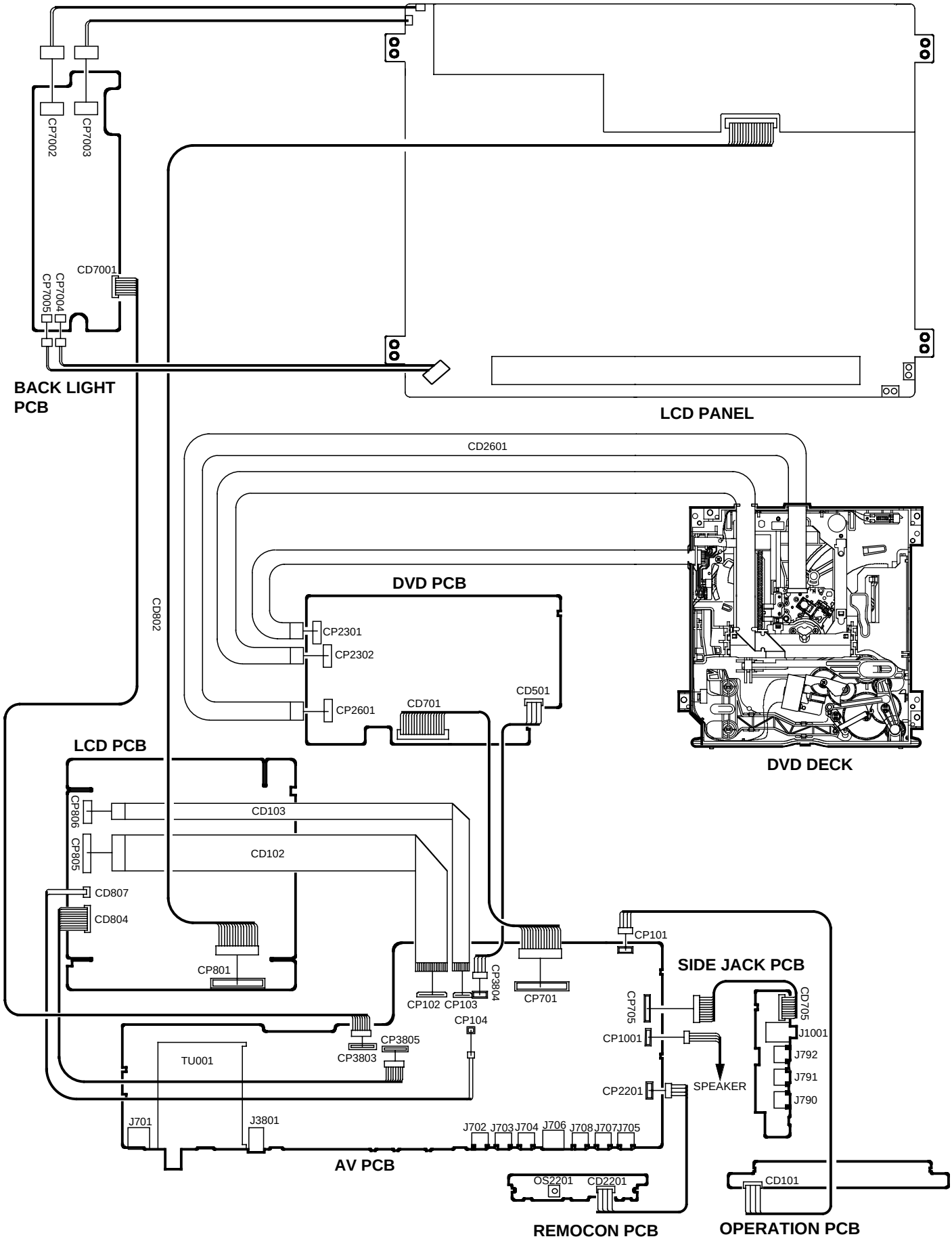
Please check if the fixed values of each the adjustment items are set correctly referring below.

(RF/AV/GAME/DVD/COMPONENT MODE)

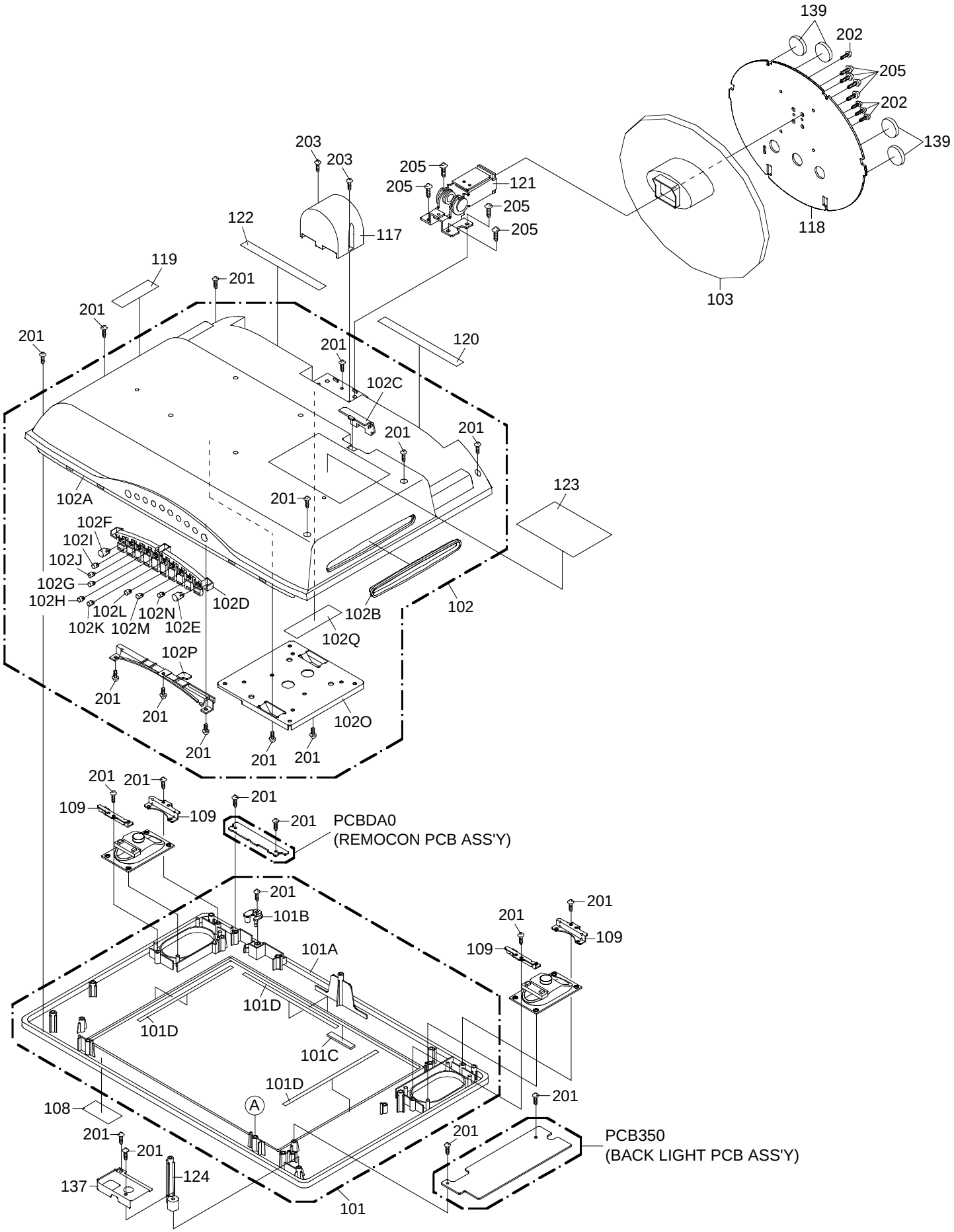
NO.	FUNCTION	STEP NO.				
		RF	AV	GAME	DVD	COMPONENT
01	OSD	2A	2A	2A	2A	2A
07	RCUT M	79	79	79	79	79
08	GCUT M	7C	7C	7C	7C	7C
09	BCUT M	7F	7F	7F	7F	7F
10	DRI1 M	3F	3F	3F	3F	3F
11	DRI2 M	3F	3F	3F	3F	3F
12	MD6 M	0	0	0	0	0
13	DTHON M	0	0	0	0	0
14	DRREF M	0	0	0	0	0
15	RCUT2 M	67	67	67	67	67
16	GCUT2 M	53	53	53	53	53
17	BCUT2 M	3F	3F	3F	3F	3F
18	GAINR M	44	44	44	44	44
19	GAING M	45	45	45	45	45
20	GAINB M	3F	3F	3F	3F	3F
21	RCUT C	79	79	79	79	79
22	GCUT C	7D	7D	7D	7D	7D
23	BCUT C	80	80	80	80	80
24	DRI1 C	3F	3F	3F	3F	3F
25	DRI2 C	3F	3F	3F	3F	3F
26	MD6 C	0	0	0	0	0
27	DTHON C	0	0	0	0	0
28	DRREF C	0	0	0	0	0
29	RCUT2 C	5A	5A	5A	5A	5A
30	GCUT2 C	4D	4D	4D	4D	4D
31	BCUT2 C	3F	3F	3F	3F	3F
32	GAINR C	47	47	47	47	47
33	GAING C	49	49	49	49	49
34	GAINB C	4C	4C	4C	4C	4C
35	RCUT W	79	79	79	79	79
36	GCUT W	7B	7B	7B	7B	7B
37	BCUT W	7C	7C	7C	7C	7C
38	DRI1 W	3F	3F	3F	3F	3F
39	DRI2 W	3F	3F	3F	3F	3F
40	MD6 W	0	0	0	0	0
41	DTHON W	0	0	0	0	0
42	DRREF W	0	0	0	0	0
43	RCUT2 W	6D	6D	6D	6D	6D
44	GCUT2 W	53	53	53	53	53
45	BCUT2 W	3F	3F	3F	3F	3F
46	GAINR W	4E	4E	4E	4E	4E
47	GAING W	48	48	48	48	48
48	GAINB W	35	35	35	35	35
49	BRI CEN	71	74	74	74	73
50	BRI MAX	90	90	90	90	90
51	BRI MIN	30	30	30	30	30
52	CON CEN	30	30	30	30	30
53	CON MAX	53	51	51	51	51
54	CON MIN	10	10	10	10	10
55	COL CEN	8C	8C	8C	8A	88
56	COL MAX	F0	F0	F0	F0	F0
57	COL MIN	00	00	00	00	00
58	TIN CEN	46	46	46	4E	4C
59	TIN MAX	7F	7F	7F	7F	7F
60	TIN MIN	00	00	00	00	00
61	SHA CEN	1E	1E	1E	1A	19
62	SHA MAX	35	35	35	35	35
63	SHA MIN	00	00	00	00	00
64	DIM	0	0	0	0	0
65	CR GAIN	05	06	06	00	00
66	CB GAIN	05	06	06	00	00
67	CR OFFS	00	00	00	00	00
68	CB OFFS	0D	00	00	00	02

ELECTRICAL ADJUSTMENTS

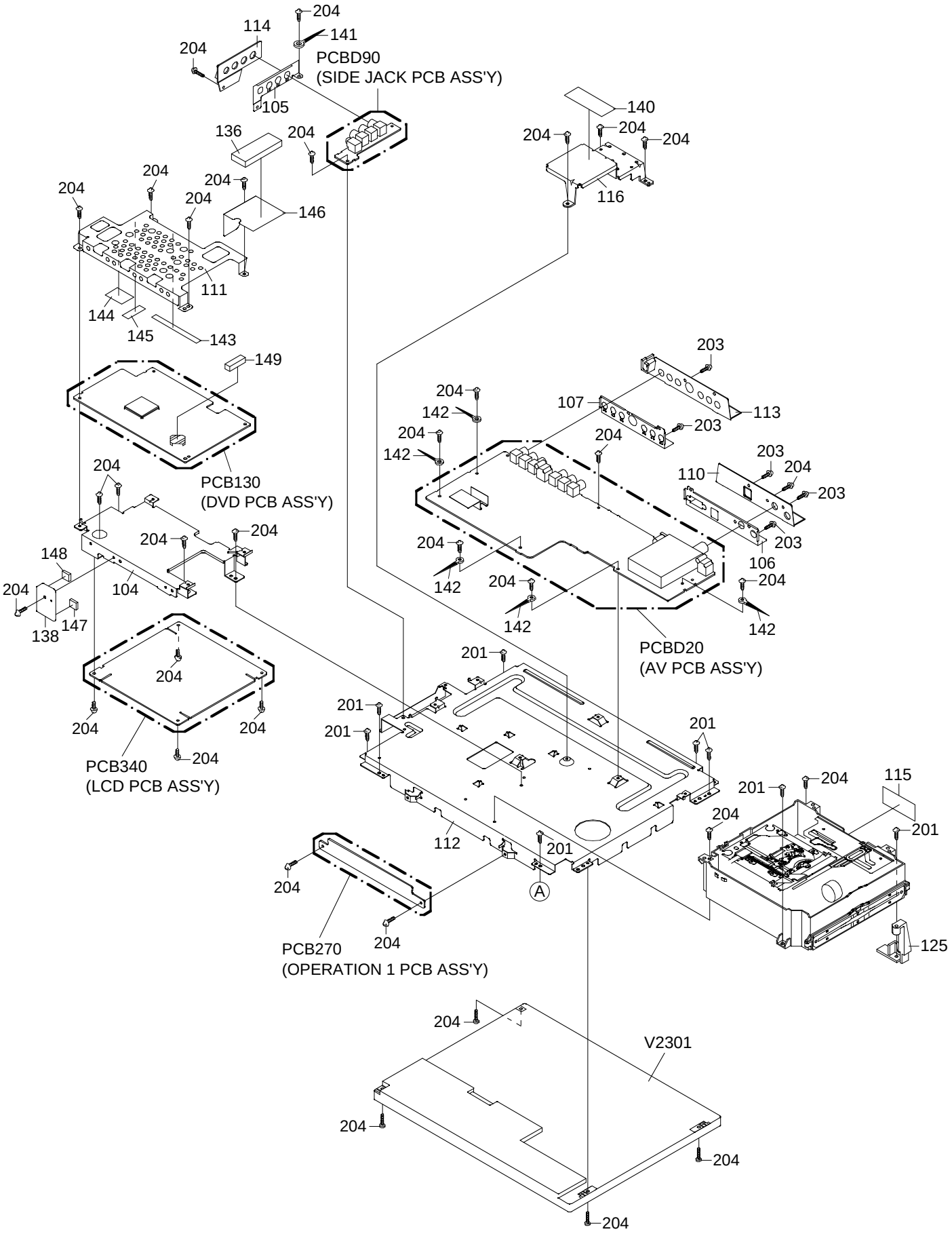
3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



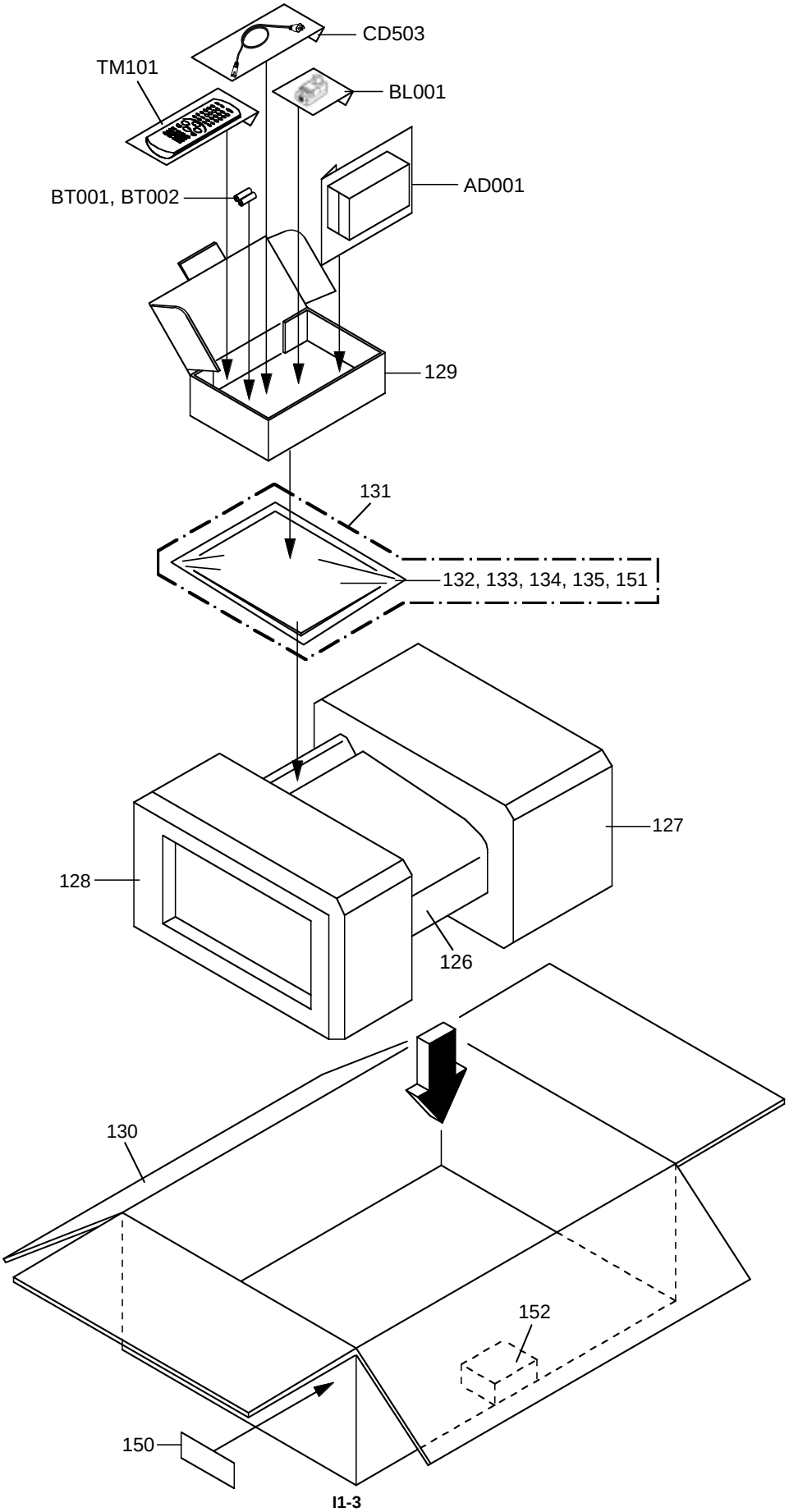
MECHANICAL EXPLODED VIEW



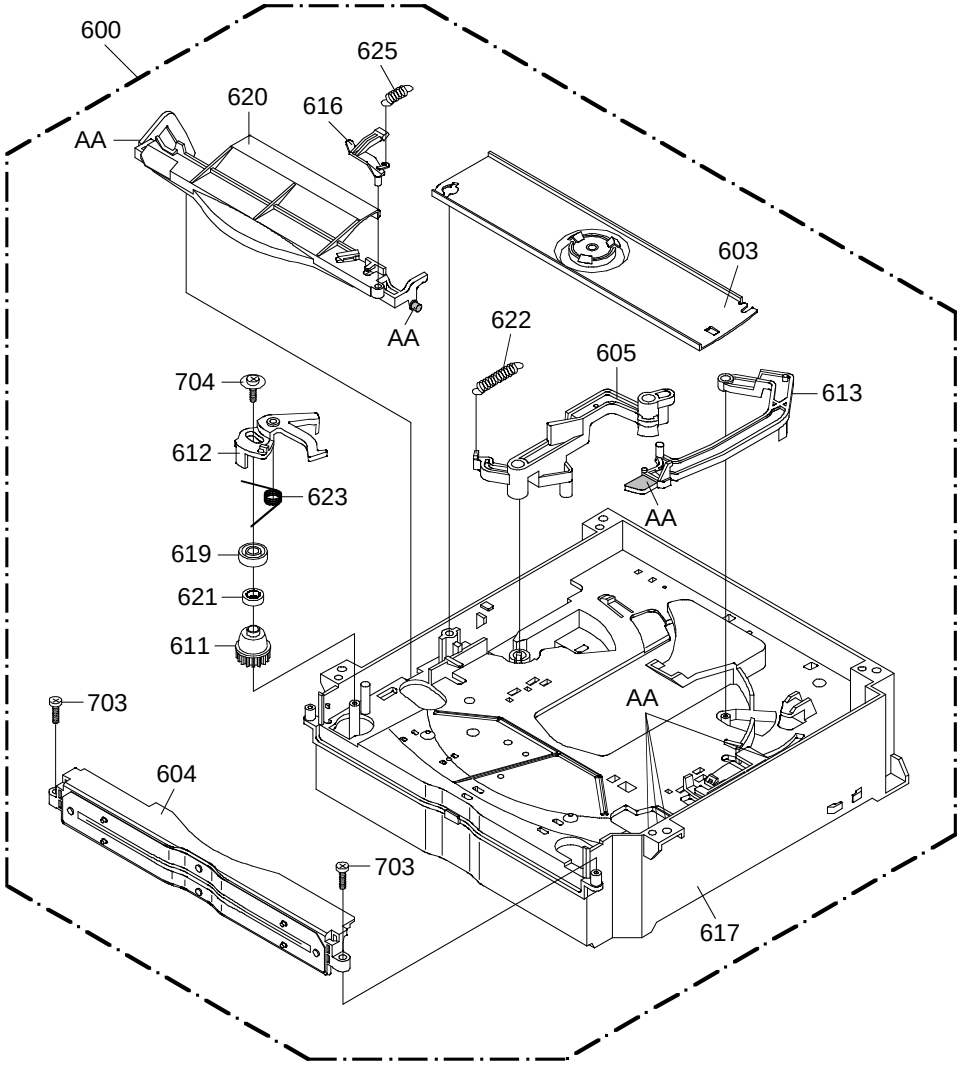
MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW
(PACKING DIAGRAM)



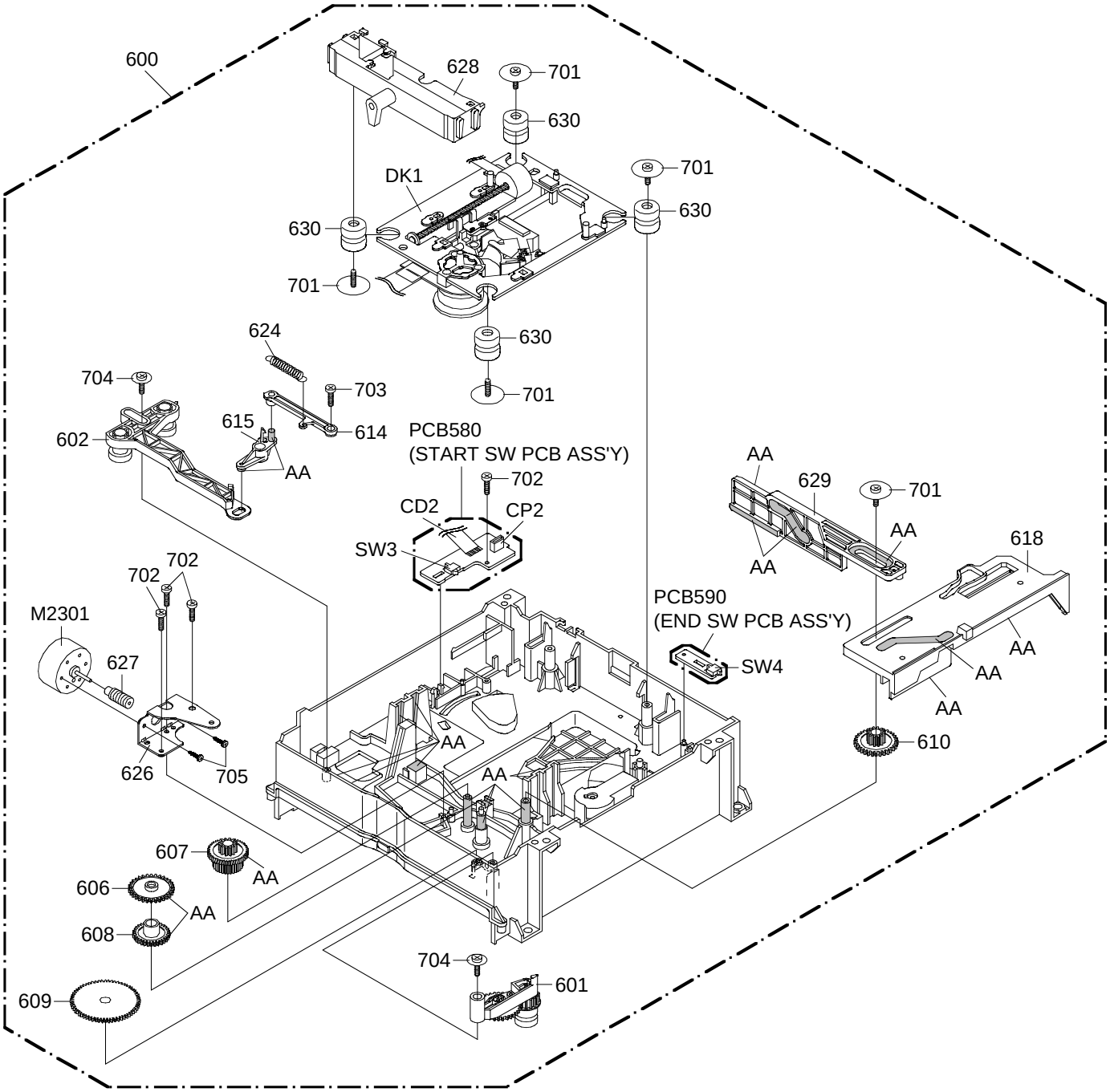
DVD DECK EXPLODED VIEW (TOP VIEW)



CLASS	MARK
GREASE	AA

NOTE: Applying positions AA for the grease are displayed for this section.
Check if the correct grease is applied for each position.

DVD DECK EXPLODED VIEW (BOTTOM VIEW)



CLASS	MARK
GREASE	AA

NOTE: Applying positions AA for the grease are displayed for this section.
Check if the correct grease is applied for each position.

MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
101	AE006794	7A7010079B	FRONT CABI ASS'Y
101A	AE006795	701WPJ1337	CABINET,FRONT
101B	AE004501	713WPA0335	GLASS,LED
101C	AE004502	7235490047	BADGE,BRAND
101D	AE000723	800WQ0A008	FELT SHEET
102	AE006796	7A7020039A	BACK CABI ASS'Y
102A	AE004504	702WPJ0028	CABINET,BACK
102B	AE005366	704WPB0004	SLOT,DVD
102C	AE004506	706WPB0002	COVER,CONECTOR
102D	AE004507	735WPA0825	BUTTON,FRAME
102E	AE006797	737WPE0015	BUTTON,CAP1
102F	AE006798	737WPE0016	BUTTON,CAP1
102G	AE006799	737WPE0017	BUTTON,CAP2
102H	AE006800	737WPE0018	BUTTON,CAP2
102I	AE006801	737WPE0019	BUTTON,CAP2
102J	AE006802	737WPE0020	BUTTON,CAP2
102K	AE006803	737WPE0021	BUTTON,CAP2
102L	AE006804	737WPE0022	BUTTON,CAP2
102M	AE006805	737WPE0023	BUTTON,CAP2
102N	AE006806	737WPE0024	BUTTON,CAP2
102O	AE006807	761WSA0233	ANGLE,HANDLE
102P	AE006808	738WPE0002	BUTTON,HOLDER
102Q	AE005368	735WEA0006	SHEET,CU
103	AE004520	704WPB0003	STAND
104	AE004522	761WSA0161	ANGLE,PCB
105	AE004523	752WSA0350	SHIELD,JACK
106	AE006809	752WSA0455	SHIELD,JACK(TUNER)
107	AE004525	752WSA0417	SHIELD,JACK
108	AE007005	7230007951	SHEET,DVD
109	AE004527	761WSA0167	ANGLE,SPEAKER
110	AE006811	771WPB0039	PLATE,JACK(TUNER)
111	AE004529	752WSA0424	SHIELD,DVD
112	AE004530	761WSA0160	COVER,LCD
113	AE005371	771WPB0022	PLATE,JACK
114	AE005372	771WPB0026	PLATE,JACK SIDE
115	AE005122	726000A073	SHEET,CAUTION
116	AE004533	761WSA0162	ANGLE,BACK
117	AE004534	702WPB0044	COVER,HINGE
118	AE004535	761WSA0166	ANGLE,STAND
119	AE005373	7230007803	SHEET,JACK(SIDE)
120	AE005374	7230007817	SHEET,JACK(TUNER)
121	AE004538	706JSA0007	HINGE ASS'Y
122	AE005375	7230007816	SHEET,JACK(AUDIO)
123	AE006812	7225490198	SHEET,RATING
124	AE005377	709WPA0032	HOLDER BOSS A
125	AE005378	709WPA0031	HOLDER BOSS B
126	AE005712	791WHAA122	FILM BAG
127	AE006813	792WHA0583	PACKAGE,RIGHT
128	AE006814	792WHA0584	PACKAGE,LEFT
129	AE004545	793WCA0013	ACCESSORY BOX
130	AE006815	793WCD1616	GIFT BOX
131	AE006816	A5N006C975	INSTRUCTION BOOK KIT
132	AE005985	JB5KD400	POLYBAG,INSTRUCTION(RED CAUTION)
133	AE004983	J2D60117A	REGISTRATION CARD
134	AE004982	J2D60129A	INFORMATION SHEET
135	AE006817	J5N00621A	INSTRUCTION BOOK
136	AE005380	800WF00063	CUSHION
137	AE005381	763WSA0033	SHIELD,COVER
138	AE005382	763WSA0034	SHIELD,MPEG
139	AE004521	800WFA0063	CUSHION,LEG

MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
140	AE005383	7220001115	SHEET,CSA WARNING	
141	AD301370	899EFBA002	WIRING-CLIP	
142	BZ710039	8995034000	CORD CLIP UL CO.	
143	AE005329	7250000590	SHEET,PC 1	
144	AE005330	7250000591	SHEET,PC 2	
145	AE005331	7250000592	SHEET,PC 3	
146	AE006818	752WSA0485	SHIELD,FFC	
147	AE001852	8965TS1010	CUSHION 65TS10-10	10x20x25
148	AE005385	8965TS1015	CUSHION 65TS10-5	15x20x16
149	AE005386	8965TS2020	CUSHION 65TS10.5-20	20x15x12
150	AE007006	7230007942	SHEET,BARCODE	
151	AE005543	J2E50729A	INFORMATION SHEET	
152	AE006819	795WHA0024	PAD FOAM	
201	AE003528	8110630A0U	SCREW,TAP TITE(P) BRAZIER	3x10
202	AE003529	811063080U	SCREW,TAP TITE(P) BRAZIER	3x8
203	AE004849	8109230A0U	SCREW,TAP TITE(B) BIND	3x10
204	AE005138	810763060U	SCREW,TAP TITE(S) BRAZIER	3x6
205	AE005140	810A14080U	SCREW,WASHER(A)	M4x8

DVD DECK REPLACEMENT PARTS LIST

	Location No.	TSB P/N	Reference No.	Description	
⚠	600	AE006820	A5N005C650S	DVD MECHA ASS'Y	A5N005C650S
	601	AE006821	92AAA0015A	ARM ROLLER ASS'Y 2	
	602	AE004553	92AAA0006A	LINK,R ASS'Y	
	603	AE004554	92AAA0007A	CLAMPER ASS'Y	
	604	AE004555	92AAA0009A	MOUTH ASS'Y	
	605	AE004556	92P100041A	ARM, DISC GUIDE	
	606	AE004557	92P100044A	GEAR, MID RACK	
	607	AE004558	92P100045A	GEAR, TERMINAL	
	608	AE004559	92P100046A	GEAR, MID ROLLER 1	
	609	AE004560	92P100047A	GEAR, MID ROLLER 2	
	610	AE004561	92P100049A	GEAR, RACK	
	611	AE004562	92P100050A	GEAR, ROLLER	
	612	AE004563	92P100052A	LEVER, DISC L	
	613	AE004564	92P100053A	LEVER, DISC R	
	614	AE004565	92P100054A	LINK, L	
	615	AE004566	92P100055A	LINK, MID	
	616	AE004567	92P100057A	LOCKER, STOPPER	
	617	AE004568	92P100058A	CHASSIS, MAIN CUT	
	618	AE004569	92P100060A	RACK, LOADING	
	619	AE004570	92P100062A	ROLLER, UPPER	
	620	AE004571	92P100064A	STOPPER, DISC	
	621	AE004572	92P200011A	RUBBER,ROLLER	
	622	AE004573	92P300010A	SPRING,GUIDE ARM	
	623	AE004574	92P300011A	SPRING,LEVER DISC L	
	624	AE004575	92P300012A	SPRING,LINK	
	625	AE004576	92P300013A	SPRING,STOPPER	
	626	AE004577	92P000006A	BRACKET, LOADING MOTOR	
	627	AE004578	92P100066A	WORM, LOADING	
	628	AE004579	92P100051A	HOLDER, TRAVERSE UNIT	
	629	AE004580	92P100061A	ROD, TRAVERSE UNIT	
	630	AE004581	92P200010A	INSULATOR	
	701	AE006822	8110E2680U	SCREW,TAP TITE(P) WH10	M2.6x8
	702	AE006823	810922060U	SCREW,TAP TITE(B) BIND	2x6
	703	AE006824	810922040U	SCREW,TAP TITE(B) BIND	2x4
	704	AE006825	8109I2060U	SCREW,TAP TITE(B) WH7	2x6
	705	AE006826	810211718U	SCREW,PAN	M1.7x1.8
	CD2	AE006406	122H092401	CORD JUMPER	2H092401
	CP2	AE006411	069EV4T060	CONNECTOR PCB SIDE	04_6232_104_015_800+
	DK1	AE006407	169Z00035A	DECK CD	CV-VTM101D
⚠	M2301	AE004589	1596998002	MOTOR	MDN3BT3ESA
	PCB580	AE006827	A5N005C580	PCB ASS'Y	DED023A
	PCB590	AE006828	A5N005C590	PCB ASS'Y	DED024A
	SW3	AE001158	0500101036	PUSH SWITCH	ESE22MH22
	SW4	AE003565	0500101037	PUSH SWITCH	ESE22MH24

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
R001	AE001781	R803R9101J	RC	100 OHM 1/16W
R002	AE001781	R803R9101J	RC	100 OHM 1/16W
R101	AE001784	R803R9103J	RC	10K OHM 1/16W
R103	AE001784	R803R9103J	RC	10K OHM 1/16W
R104	BZ210182	R002T4103J	RC	10K OHM 1/4W
R105	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R106	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R107	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R109	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R110	AE001893	R803R9332J	RC	3.3K OHM 1/16W
R113	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R114	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R115	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R117	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R120	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R123	AE001784	R803R9103J	RC	10K OHM 1/16W
R126	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R129	AE001784	R803R9103J	RC	10K OHM 1/16W
R132	AE001784	R803R9103J	RC	10K OHM 1/16W
R134	AE001784	R803R9103J	RC	10K OHM 1/16W
R135	AE001893	R803R9332J	RC	3.3K OHM 1/16W
R140	AE001783	R803R9102J	RC	1K OHM 1/16W
R141	AE001783	R803R9102J	RC	1K OHM 1/16W
R142	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R143	AE001781	R803R9101J	RC	100 OHM 1/16W
R144	AE001783	R803R9102J	RC	1K OHM 1/16W
R145	AE001783	R803R9102J	RC	1K OHM 1/16W
R147	AE001781	R803R9101J	RC	100 OHM 1/16W
R153	AE001892	R803R9331J	RC	330 OHM 1/16W
R159	AE001783	R803R9102J	RC	1K OHM 1/16W
R161	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R162	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R163	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R164	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R601	AE000849	R803R9152J	RC	1.5K OHM 1/16W
R602	AE000849	R803R9152J	RC	1.5K OHM 1/16W
R603	AE000849	R803R9152J	RC	1.5K OHM 1/16W
R604	AE000849	R803R9152J	RC	1.5K OHM 1/16W
R605	AE002149	R803R9274J	RC	270K OHM 1/16W
R606	AE000849	R803R9152J	RC	1.5K OHM 1/16W
R607	AE001781	R803R9101J	RC	100 OHM 1/16W
R608	AE001787	R803R9122J	RC	1.2K OHM 1/16W
R609	AE002533	R803R9681J	RC	680 OHM 1/16W
R610	AE001783	R803R9102J	RC	1K OHM 1/16W
R612	AE001783	R803R9102J	RC	1K OHM 1/16W
R613	AE002533	R803R9681J	RC	680 OHM 1/16W
R614	AE001783	R803R9102J	RC	1K OHM 1/16W
R616	AE001783	R803R9102J	RC	1K OHM 1/16W
R617	AE001796	R803R9471J	RC	470 OHM 1/16W
R618	AE001796	R803R9471J	RC	470 OHM 1/16W
R619	AE002147	R803R9182J	RC	1.8K OHM 1/16W
R620	AE002147	R803R9182J	RC	1.8K OHM 1/16W
R621	AE002147	R803R9182J	RC	1.8K OHM 1/16W
R622	AE002147	R803R9182J	RC	1.8K OHM 1/16W
R623	AE001800	R803R9680J	RC	68 OHM 1/16W
R624	AE001800	R803R9680J	RC	68 OHM 1/16W
R625	AE001800	R803R9680J	RC	68 OHM 1/16W
R701	AE001805	R803R9822J	RC	8.2K OHM 1/16W
R702	AE001805	R803R9822J	RC	8.2K OHM 1/16W
R703	AE005089	R803R9184J	RC	180K OHM 1/16W
R704	AE002871	R803R9224J	RC	220K OHM 1/16W
R705	AE001783	R803R9102J	RC	1K OHM 1/16W
R706	AE005089	R803R9184J	RC	180K OHM 1/16W
R707	AE002871	R803R9224J	RC	220K OHM 1/16W
R708	AE001783	R803R9102J	RC	1K OHM 1/16W
R709	79091390	R002T2101J	RC	100 OHM 1/2W
R712	AE000358	R002T4471J	RC	470 OHM 1/4W
R713	AE000358	R002T4471J	RC	470 OHM 1/4W
R715	AE001785	R803R9104J	RC	100K OHM 1/16W
R716	AE001784	R803R9103J	RC	10K OHM 1/16W
R717	AE001784	R803R9103J	RC	10K OHM 1/16W

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
R718	AE001797	R803R9473J	RC	47K OHM 1/16W
R719	AE001797	R803R9473J	RC	47K OHM 1/16W
R720	BZ210164	R002T4104J	RC	100K OHM 1/4W
R721	AE001784	R803R9103J	RC	10K OHM 1/16W
R722	AE001784	R803R9103J	RC	10K OHM 1/16W
R723	AE001796	R803R9471J	RC	470 OHM 1/16W
R724	AE002532	R803R9272J	RC	2.7K OHM 1/16W
R725	AE001784	R803R9103J	RC	10K OHM 1/16W
R726	AE001788	R803R9123J	RC	12K OHM 1/16W
R727	AE001893	R803R9332J	RC	3.3K OHM 1/16W
R728	AE001784	R803R9103J	RC	10K OHM 1/16W
R729	AE001784	R803R9103J	RC	10K OHM 1/16W
R732	AE001803	R803R9750J	RC	75 OHM 1/16W
R733	AE001803	R803R9750J	RC	75 OHM 1/16W
R734	AE001803	R803R9750J	RC	75 OHM 1/16W
R736	BZ210182	R002T4103J	RC	10K OHM 1/4W
R737	AE001803	R803R9750J	RC	75 OHM 1/16W
R744	AE001796	R803R9471J	RC	470 OHM 1/16W
R745	AE000487	R002T4560J	RC	56 OHM 1/4W
R746	AE002532	R803R9272J	RC	2.7K OHM 1/16W
R747	AE001784	R803R9103J	RC	10K OHM 1/16W
R748	AE001788	R803R9123J	RC	12K OHM 1/16W
R749	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R750	AE001783	R803R9102J	RC	1K OHM 1/16W
R751	AE001783	R803R9102J	RC	1K OHM 1/16W
R752	AE001784	R803R9103J	RC	10K OHM 1/16W
R753	AE001785	R803R9104J	RC	100K OHM 1/16W
R754	AE001800	R803R9680J	RC	68 OHM 1/16W
R755	AE001892	R803R9331J	RC	330 OHM 1/16W
R756	AE001893	R803R9332J	RC	3.3K OHM 1/16W
R761	AE002147	R803R9182J	RC	1.8K OHM 1/16W
R762	AE000849	R803R9152J	RC	1.5K OHM 1/16W
R764	AE001283	R803R9470J	RC	47 OHM 1/16W
R765	AE001283	R803R9470J	RC	47 OHM 1/16W
R769	AE001887	R803R9105J	RC	1M OHM 1/16W
R770	AE001887	R803R9105J	RC	1M OHM 1/16W
R772	AE001803	R803R9750J	RC	75 OHM 1/16W
R773	AE001803	R803R9750J	RC	75 OHM 1/16W
R774	AE001803	R803R9750J	RC	75 OHM 1/16W
R775	AE001803	R803R9750J	RC	75 OHM 1/16W
R776	AE001803	R803R9750J	RC	75 OHM 1/16W
R791	AE001803	R803R9750J	RC	75 OHM 1/16W
R802	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R803	AE001784	R803R9103J	RC	10K OHM 1/16W
R804	AE002151	R803R9391J	RC	390 OHM 1/16W
R806	AE001781	R803R9101J	RC	100 OHM 1/16W
R809	AE001781	R803R9101J	RC	100 OHM 1/16W
R810	AE001781	R803R9101J	RC	100 OHM 1/16W
R811	AE001781	R803R9101J	RC	100 OHM 1/16W
R812	AE001788	R803R9123J	RC	12K OHM 1/16W
R813	AE001788	R803R9123J	RC	12K OHM 1/16W
R814	AE001782	R803R9102F	RC	1K OHM 1/16W
R815	AE005090	R803R9221F	RC	220 OHM 1/16W
R816	AE001782	R803R9102F	RC	1K OHM 1/16W
R817	AE001782	R803R9102F	RC	1K OHM 1/16W
R826	AE001283	R803R9470J	RC	47 OHM 1/16W
R829	AE001283	R803R9470J	RC	47 OHM 1/16W
R831	AE001781	R803R9101J	RC	100 OHM 1/16W
R832	AE001781	R803R9101J	RC	100 OHM 1/16W
R858	AE001783	R803R9102J	RC	1K OHM 1/16W
R859	AE001784	R803R9103J	RC	10K OHM 1/16W
R860	AE001798	R803R9560J	RC	56 OHM 1/16W
R861	AE002151	R803R9391J	RC	390 OHM 1/16W
R901	AE005089	R803R9184J	RC	180K OHM 1/16W
R902	AE001893	R803R9332J	RC	3.3K OHM 1/16W
R903	AE001787	R803R9122J	RC	1.2K OHM 1/16W
R904	AE001787	R803R9122J	RC	1.2K OHM 1/16W
R906	AE001781	R803R9101J	RC	100 OHM 1/16W
R911	AE001781	R803R9101J	RC	100 OHM 1/16W
R1006	AE002530	R803R9124J	RC	120K OHM 1/16W
R1007	AD300651	R002T4272J	RC	2.7K OHM 1/4W

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
R1008	AD300651	R002T4272J	RC	2.7K OHM 1/4W
R1011	AE002871	R803R9224J	RC	220K OHM 1/16W
R1012	AE001783	R803R9102J	RC	1K OHM 1/16W
R1013	AE002530	R803R9124J	RC	120K OHM 1/16W
R1014	AE001781	R803R9101J	RC	100 OHM 1/16W
R1018	AE001799	R803R9562J	RC	5.6K OHM 1/16W
R1019	AE000849	R803R9152J	RC	1.5K OHM 1/16W
R1020	AE001788	R803R9123J	RC	12K OHM 1/16W
R1021	AE002530	R803R9124J	RC	120K OHM 1/16W
R1022	AE001783	R803R9102J	RC	1K OHM 1/16W
R1023	AE002530	R803R9124J	RC	120K OHM 1/16W
R1024	AE002154	R803R9821J	RC	820 OHM 1/16W
R1025	AE002147	R803R9182J	RC	1.8K OHM 1/16W
R1026	AE001801	R803R9682J	RC	6.8K OHM 1/16W
R1027	AE002142	R002T4393J	RC	39K OHM 1/4W
R1028	AE001895	R803R9392J	RC	3.9K OHM 1/16W
R1029	AE001895	R803R9392J	RC	3.9K OHM 1/16W
R1030	AE001788	R803R9123J	RC	12K OHM 1/16W
R1031	AE001788	R803R9123J	RC	12K OHM 1/16W
R1032	AE002147	R803R9182J	RC	1.8K OHM 1/16W
R1033	AE002154	R803R9821J	RC	820 OHM 1/16W
R1034	AE002150	R803R9333J	RC	33K OHM 1/16W
R1035	AE002150	R803R9333J	RC	33K OHM 1/16W
R1036	AE001801	R803R9682J	RC	6.8K OHM 1/16W
R1037	AE001788	R803R9123J	RC	12K OHM 1/16W
R1039	AE001886	R803R9100J	RC	10 OHM 1/16W
R1040	AE001886	R803R9100J	RC	10 OHM 1/16W
R1041	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
R1042	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
R1043	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
R1044	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
R1045	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
R1047	AE001784	R803R9103J	RC	10K OHM 1/16W
R1048	AE001799	R803R9562J	RC	5.6K OHM 1/16W
R1049	AE001784	R803R9103J	RC	10K OHM 1/16W
⚠R1050	AE003270	R3X28B2R7J	R,METAL OXIDE	2.7 OHM 3W
R1051	AE001784	R803R9103J	RC	10K OHM 1/16W
⚠R1053	AE000037	R3X28B3R9J	R,METAL	3.9 OHM 3W
R2202	AD301301	R002T4152J	RC	1.5K OHM 1/4W
R2204	BZ210119	R002T4102J	RC	1K OHM 1/4W
R2206	AE000362	R002T4821J	RC	820 OHM 1/4W
R2209	AE002151	R803R9391J	RC	390 OHM 1/16W
R2251	AE000362	R002T4821J	RC	820 OHM 1/4W
R2252	BZ210119	R002T4102J	RC	1K OHM 1/4W
R2253	AD301301	R002T4152J	RC	1.5K OHM 1/4W
R2254	AD300651	R002T4272J	RC	2.7K OHM 1/4W
R2255	BZ210162	R002T4682J	RC	6.8K OHM 1/4W
R2301	AE001784	R803R9103J	RC	10K OHM 1/16W
R2302	AE001781	R803R9101J	RC	100 OHM 1/16W
R2303	AE001891	R803R9223J	RC	22K OHM 1/16W
R2304	AE005096	R803R9512J	RC	5.1K OHM 1/16W
R2306	AE001886	R803R9100J	RC	10 OHM 1/16W
R2307	AE001886	R803R9100J	RC	10 OHM 1/16W
R2309	AE001784	R803R9103J	RC	10K OHM 1/16W
R2310	79091264	R803R94R7J	RC	4.7 OHM 1/16W
R2312	AE001784	R803R9103J	RC	10K OHM 1/16W
R2314	AE001793	R803R92R2J	RC	2.2 OHM 1/16W
R2315	AE002145	R803R9153J	RC	15K OHM 1/16W
R2316	AE002907	R803R9562F	RC	5.6K OHM 1/16W
R2319	AE001784	R803R9103J	RC	10K OHM 1/16W
R2320	AE001785	R803R9104J	RC	100K OHM 1/16W
R2321	AE001886	R803R9100J	RC	10 OHM 1/16W
R2322	AE001886	R803R9100J	RC	10 OHM 1/16W
R2323	AE001886	R803R9100J	RC	10 OHM 1/16W
R2324	AE001886	R803R9100J	RC	10 OHM 1/16W
R2325	79091264	R803R94R7J	RC	4.7 OHM 1/16W
R2326	79091264	R803R94R7J	RC	4.7 OHM 1/16W
R2327	79091264	R803R94R7J	RC	4.7 OHM 1/16W
R2330	AE001784	R803R9103J	RC	10K OHM 1/16W
R2331	AE002145	R803R9153J	RC	15K OHM 1/16W
R2332	AE001784	R803R9103J	RC	10K OHM 1/16W

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
R2334	AE001781	R803R9101J	RC	100 OHM 1/16W
R2335	AE002907	R803R9562F	RC	5.6K OHM 1/16W
R2337	AE001782	R803R9102F	RC	1K OHM 1/16W
R2338	AE001782	R803R9102F	RC	1K OHM 1/16W
R2341	AE001788	R803R9123J	RC	12K OHM 1/16W
R2346	AE002907	R803R9562F	RC	5.6K OHM 1/16W
R2347	AE002907	R803R9562F	RC	5.6K OHM 1/16W
R2350	AE002907	R803R9562F	RC	5.6K OHM 1/16W
R2351	AE002907	R803R9562F	RC	5.6K OHM 1/16W
R2601	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2602	AE000850	R803R9185J	RC	1.8M OHM 1/16W
R2603	AE000847	R803R9133F	RC	13K OHM 1/16W
R2604	AE000852	R803R9273F	RC	27K OHM 1/16W
R2605	AE000845	R803R9103F	RC	10K OHM 1/16W
R2607	AE001787	R803R9122J	RC	1.2K OHM 1/16W
R2608	AE001787	R803R9122J	RC	1.2K OHM 1/16W
R2609	AE001787	R803R9122J	RC	1.2K OHM 1/16W
R2610	AE000853	R803R9512F	RC	5.1K OHM 1/16W
R2611	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2612	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2613	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2614	AE000846	R803R9123F	RC	12K OHM 1/16W
R2615	AE001886	R803R9100J	RC	10 OHM 1/16W
R2616	AE001783	R803R9102J	RC	1K OHM 1/16W
R2617	AE001783	R803R9102J	RC	1K OHM 1/16W
R2618	79091397	R803R9180J	RC	18 OHM 1/16W
R2619	AE001781	R803R9101J	RC	100 OHM 1/16W
R2620	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2621	AE001781	R803R9101J	RC	100 OHM 1/16W
R2622	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2623	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2624	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2626	AE002151	R803R9391J	RC	390 OHM 1/16W
R2633	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2634	AE001887	R803R9105J	RC	1M OHM 1/16W
R2635	AE001887	R803R9105J	RC	1M OHM 1/16W
R2643	AE001783	R803R9102J	RC	1K OHM 1/16W
R2644	AE001790	R803R9222J	RC	2.2K OHM 1/16W
R2645	AE001783	R803R9102J	RC	1K OHM 1/16W
R2646	AE001790	R803R9222J	RC	2.2K OHM 1/16W
R2647	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R2648	AE000848	R803R9133J	RC	13K OHM 1/16W
R2654	79091397	R803R9180J	RC	18 OHM 1/16W
R3001	AE001784	R803R9103J	RC	10K OHM 1/16W
R3002	AE001799	R803R9562J	RC	5.6K OHM 1/16W
R3003	AE001783	R803R9102J	RC	1K OHM 1/16W
R3004	AE000845	R803R9103F	RC	10K OHM 1/16W
R3005	AE000845	R803R9103F	RC	10K OHM 1/16W
R3006	AD302291	R803R9683J	RC	68K OHM 1/16W
R3007	AE001898	R803R9563J	RC	56K OHM 1/16W
R3008	AE002908	R803R9183F	RC	18K OHM 1/16W
R3009	AE000845	R803R9103F	RC	10K OHM 1/16W
R3010	AE000845	R803R9103F	RC	10K OHM 1/16W
R3011	AD302291	R803R9683J	RC	68K OHM 1/16W
R3012	AE001898	R803R9563J	RC	56K OHM 1/16W
R3013	AE002152	R803R9561J	RC	560 OHM 1/16W
R3014	AE001799	R803R9562J	RC	5.6K OHM 1/16W
R3015	AE001886	R803R9100J	RC	10 OHM 1/16W
R3016	AE001886	R803R9100J	RC	10 OHM 1/16W
R3018	AE006856	R803R9752F	RC	7.5K OHM 1/16W
R3019	AE005088	R803R9182F	RC	1.8K OHM 1/16W
R3020	AE002152	R803R9561J	RC	560 OHM 1/16W
R3021	AE001799	R803R9562J	RC	5.6K OHM 1/16W
R3022	AE001886	R803R9100J	RC	10 OHM 1/16W
R3023	AE001886	R803R9100J	RC	10 OHM 1/16W
R3024	AE005090	R803R9221F	RC	220 OHM 1/16W
R3025	AE005092	R803R9272F	RC	2.7K OHM 1/16W
R3026	AE005088	R803R9182F	RC	1.8K OHM 1/16W
R3027	AE001897	R803R9511F	RC	510 OHM 1/16W
R3029	AE001782	R803R9102F	RC	1K OHM 1/16W
R3802	AE002150	R803R9333J	RC	33K OHM 1/16W

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
R3803	AE005097	R861R44R7X	RC	0.047 OHM 1/4W
R3804	AE005097	R861R44R7X	RC	0.047 OHM 1/4W
R3807	AE005088	R803R9182F	RC	1.8K OHM 1/16W
R3808	AE005093	R803R9303F	RC	30K OHM 1/16W
R3809	AE000845	R803R9103F	RC	10K OHM 1/16W
R3811	AE001784	R803R9103J	RC	10K OHM 1/16W
R3812	BZ210122	R002T4472J	RC	4.7K OHM 1/4W
R3813	AE001801	R803R9682J	RC	6.8K OHM 1/16W
R3814	AE001893	R803R9332J	RC	3.3K OHM 1/16W
R3815	AE001891	R803R9223J	RC	22K OHM 1/16W
R3816	AE001792	R803R9273J	RC	27K OHM 1/16W
R3817	BZ210182	R002T4103J	RC	10K OHM 1/4W
R3818	BZ210182	R002T4103J	RC	10K OHM 1/4W
R4001	AE001894	R803R9391F	RC	390 OHM 1/16W
R4002	AE001899	R803R9750F	RC	75 OHM 1/16W
R4003	AE001899	R803R9750F	RC	75 OHM 1/16W
R4004	AE001899	R803R9750F	RC	75 OHM 1/16W
R4005	AE001899	R803R9750F	RC	75 OHM 1/16W
R4008	AE001781	R803R9101J	RC	100 OHM 1/16W
R4011	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4012	AE001887	R803R9105J	RC	1M OHM 1/16W
R4013	AE001283	R803R9470J	RC	47 OHM 1/16W
R4014	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4018	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4019	AE001794	R803R9330J	RC	33 OHM 1/16W
R4020	AE001794	R803R9330J	RC	33 OHM 1/16W
R4021	AE001794	R803R9330J	RC	33 OHM 1/16W
R4022	AE002872	R803R9271J	RC	270 OHM 1/16W
R4023	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4024	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4025	AE002872	R803R9271J	RC	270 OHM 1/16W
R4026	AE001890	R803R9221J	RC	220 OHM 1/16W
R4027	AE001890	R803R9221J	RC	220 OHM 1/16W
R4031	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4032	AE001891	R803R9223J	RC	22K OHM 1/16W
R4033	AE001793	R803R92R2J	RC	2.2 OHM 1/16W
R4034	AE001793	R803R92R2J	RC	2.2 OHM 1/16W
R4035	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4036	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4037	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4038	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4039	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4040	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4041	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4042	AE001781	R803R9101J	RC	100 OHM 1/16W
R4043	AE001784	R803R9103J	RC	10K OHM 1/16W
R4044	AE001891	R803R9223J	RC	22K OHM 1/16W
R4045	AE001783	R803R9102J	RC	1K OHM 1/16W
R4046	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4048	AE001797	R803R9473J	RC	47K OHM 1/16W
R4049	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4050	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4051	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4052	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R4053	AE001783	R803R9102J	RC	1K OHM 1/16W
R4054	AE001783	R803R9102J	RC	1K OHM 1/16W
R4056	AE001892	R803R9331J	RC	330 OHM 1/16W
R4057	AE001892	R803R9331J	RC	330 OHM 1/16W
R4058	AE001890	R803R9221J	RC	220 OHM 1/16W
R4059	AE001781	R803R9101J	RC	100 OHM 1/16W
R4060	AE001891	R803R9223J	RC	22K OHM 1/16W
R4061	AE001784	R803R9103J	RC	10K OHM 1/16W
R4064	AE001781	R803R9101J	RC	100 OHM 1/16W
R4073	AE001892	R803R9331J	RC	330 OHM 1/16W
R7004	AE005095	R803R9433J	RC	43K OHM 1/16W
R7005	AE005093	R803R9303F	RC	30K OHM 1/16W
R7006	AE001783	R803R9102J	RC	1K OHM 1/16W
R7007	AE005083	R803R9104F	RC	100K OHM 1/16W
R7008	AE005083	R803R9104F	RC	100K OHM 1/16W
R7010	AE001887	R803R9105J	RC	1M OHM 1/16W
R7011	AE005094	R803R9304J	RC	300K OHM 1/16W

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
R7012	AE005083	R803R9104F	RC	100K OHM 1/16W
R7013	AE000851	R803R9203J	RC	20K OHM 1/16W
R7014	AE005084	R803R9113F	RC	11K OHM 1/16W
R7015	AE005091	R803R9244F	RC	240K OHM 1/16W
R7016	AE001783	R803R9102J	RC	1K OHM 1/16W
R7018	AE005085	R803R9114F	RC	110K OHM 1/16W
R7019	79091264	R803R94R7J	RC	4.7 OHM 1/16W
R7020	AE001781	R803R9101J	RC	100 OHM 1/16W
R7021	AE005086	R803R9121F	RC	120 OHM 1/16W
R7022	AE005086	R803R9121F	RC	120 OHM 1/16W
R7023	AE001781	R803R9101J	RC	100 OHM 1/16W
R7024	79091325	R801R7474J	RC	470K OHM 1/10W
R7025	79091325	R801R7474J	RC	470K OHM 1/10W
R7026	79091325	R801R7474J	RC	470K OHM 1/10W
R7027	79091325	R801R7474J	RC	470K OHM 1/10W
R7028	79091325	R801R7474J	RC	470K OHM 1/10W
R7029	79091325	R801R7474J	RC	470K OHM 1/10W
R7030	79091325	R801R7474J	RC	470K OHM 1/10W
R7031	79091325	R801R7474J	RC	470K OHM 1/10W
R7032	79091325	R801R7474J	RC	470K OHM 1/10W
R7033	79091325	R801R7474J	RC	470K OHM 1/10W
R7034	79091325	R801R7474J	RC	470K OHM 1/10W
R7035	79091325	R801R7474J	RC	470K OHM 1/10W
R7036	BZ210263	R801R7562F	RC	5.6K OHM 1/10W
R7037	79091325	R801R7474J	RC	470K OHM 1/10W
R7038	79091325	R801R7474J	RC	470K OHM 1/10W
R7039	79091325	R801R7474J	RC	470K OHM 1/10W
R7040	79091325	R801R7474J	RC	470K OHM 1/10W
R7041	79091325	R801R7474J	RC	470K OHM 1/10W
R7042	79091325	R801R7474J	RC	470K OHM 1/10W
R7043	79091325	R801R7474J	RC	470K OHM 1/10W
R7044	79091325	R801R7474J	RC	470K OHM 1/10W
R7045	79091325	R801R7474J	RC	470K OHM 1/10W
R7046	79091325	R801R7474J	RC	470K OHM 1/10W
R7047	79091325	R801R7474J	RC	470K OHM 1/10W
R7048	79091325	R801R7474J	RC	470K OHM 1/10W
R7049	BZ210263	R801R7562F	RC	5.6K OHM 1/10W
R7051	79091325	R801R7474J	RC	470K OHM 1/10W
R7052	79091325	R801R7474J	RC	470K OHM 1/10W
R7053	79091325	R801R7474J	RC	470K OHM 1/10W
R7054	79091325	R801R7474J	RC	470K OHM 1/10W
R7055	79091325	R801R7474J	RC	470K OHM 1/10W
R7056	79091325	R801R7474J	RC	470K OHM 1/10W
R7057	79091325	R801R7474J	RC	470K OHM 1/10W
R7058	79091325	R801R7474J	RC	470K OHM 1/10W
R7059	79091325	R801R7474J	RC	470K OHM 1/10W
R7060	79091325	R801R7474J	RC	470K OHM 1/10W
R7061	79091325	R801R7474J	RC	470K OHM 1/10W
R7062	79091325	R801R7474J	RC	470K OHM 1/10W
R7063	BZ210263	R801R7562F	RC	5.6K OHM 1/10W
R7066	79091325	R801R7474J	RC	470K OHM 1/10W
R7067	79091325	R801R7474J	RC	470K OHM 1/10W
R7068	79091325	R801R7474J	RC	470K OHM 1/10W
R7069	79091325	R801R7474J	RC	470K OHM 1/10W
R7070	79091325	R801R7474J	RC	470K OHM 1/10W
R7071	79091325	R801R7474J	RC	470K OHM 1/10W
R7072	79091325	R801R7474J	RC	470K OHM 1/10W
R7073	79091325	R801R7474J	RC	470K OHM 1/10W
R7074	79091325	R801R7474J	RC	470K OHM 1/10W
R7075	79091325	R801R7474J	RC	470K OHM 1/10W
R7076	79091325	R801R7474J	RC	470K OHM 1/10W
R7077	79091325	R801R7474J	RC	470K OHM 1/10W
R7078	BZ210263	R801R7562F	RC	5.6K OHM 1/10W
R7082	AE005087	R803R9181F	RC	180 OHM 1/16W
R7083	79091325	R801R7474J	RC	470K OHM 1/10W
R7084	79091325	R801R7474J	RC	470K OHM 1/10W
R7085	79091325	R801R7474J	RC	470K OHM 1/10W
R7086	79091325	R801R7474J	RC	470K OHM 1/10W
R7087	79091325	R801R7474J	RC	470K OHM 1/10W
R7088	79091325	R801R7474J	RC	470K OHM 1/10W
R7089	79091325	R801R7474J	RC	470K OHM 1/10W

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
R7090	79091325	R801R7474J	RC	470K OHM 1/10W
R7092	AE001783	R803R9102J	RC	1K OHM 1/16W
R7093	AE001283	R803R9470J	RC	47 OHM 1/16W
R8512	AE001793	R803R92R2J	RC	2.2 OHM 1/16W
R8513	AE001793	R803R92R2J	RC	2.2 OHM 1/16W
R8529	AD302345	R803R9472J	RC	4.7K OHM 1/16W
R8555	AE001797	R803R9473J	RC	47K OHM 1/16W
		CAPACITORS		
C001	AE005078	E62FT2331M	CE	330 UF 16V
C002	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C003	AE000840	CS0PCH4K1J	CC	27 PF 50V CH
C008	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C009	AD301434	E02LU4101M	CE	100 UF 35V
C011	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C101	AE001769	E50HU1330M	CE	33 UF 10 V
C102	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C103	79091065	CS0PCH4N1J	CC	39 PF 50V CH
C104	AE002124	CS0PB0315K	CC	0.1 UF 25V B
⚠C105	AD301434	E02LU4101M	CE	100 UF 35V
C106	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C107	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C108	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C109	79091065	CS0PCH4N1J	CC	39 PF 50V CH
C115	BZ110161	CQGTB04H3K	CC	0.0022UF 50V B
C116	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C117	AE002124	CS0PB0315K	CC	0.1 UF 25V B
⚠C119	AD301434	E02LU4101M	CE	100 UF 35V
C120	AE001729	CS0PCH412J	CC	100 PF 50V CH
C121	AE001729	CS0PCH412J	CC	100 PF 50V CH
C122	AE001729	CS0PCH412J	CC	100 PF 50V CH
C131	AE002831	CS0PCH4Q2J	CC	470 PF 50V CH
C132	AE002831	CS0PCH4Q2J	CC	470 PF 50V CH
C134	AE001729	CS0PCH412J	CC	100 PF 50V CH
C135	79091065	CS0PCH4N1J	CC	39 PF 50V CH
C601	AE005074	E61UM5R47D	CE	0.47 UF 50V
C604	AE005074	E61UM5R47D	CE	0.47 UF 50V
C606	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C607	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C608	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C609	AE005076	E61UMQ331D	CE	330 UF 4V
C610	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C611	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C613	AE001733	CS0PCH4H2J	CC	220 PF 50V CH
C614	AE001733	CS0PCH4H2J	CC	220 PF 50V CH
C615	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C616	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C620	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C621	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C622	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C623	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C624	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C625	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C626	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C627	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C628	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C629	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C630	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C631	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C632	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C633	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C634	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C635	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C636	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C637	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C638	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C639	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C640	AE002822	CS0PB04E3K	CC	0.0015UF 50V B
C641	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C642	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C643	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C644	AE002822	CS0PB04E3K	CC	0.0015UF 50V B

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C645	79091382	CS0PCH440C	CC	4 PF 50V CH
C646	79091061	CS0PCH4G1J	CC	18 PF 50V CH
C647	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C648	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C649	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C650	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C651	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C652	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C653	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C654	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C655	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C656	AE005075	E61UMQ221D	CE	220 UF 4V
C657	AE005073	E61UM2100D	CE	10 UF 16V
C658	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C659	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C660	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C661	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C662	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C663	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C664	79091065	CS0PCH4N1J	CC	39 PF 50V CH
C666	79091065	CS0PCH4N1J	CC	39 PF 50V CH
C668	79091065	CS0PCH4N1J	CC	39 PF 50V CH
C671	79091384	CS0PCH4L2J	CC	330 PF 50V CH
C674	AE001729	CS0PCH412J	CC	100 PF 50V CH
C675	AE002832	CS0PCH4S2J	CC	560 PF 50V CH
C676	AE000838	CS0PB0N16K	CC	1 UF 10V B
C677	AE000838	CS0PB0N16K	CC	1 UF 10V B
C678	79091065	CS0PCH4N1J	CC	39 PF 50V CH
C679	79091065	CS0PCH4N1J	CC	39 PF 50V CH
C680	79091384	CS0PCH4L2J	CC	330 PF 50V CH
C704	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C705	AD301535	E02LU2101M	CE	100 UF 16V
C708	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C709	AE002126	CS0PB04E4K	CC	0.015 UF 50V B
C710	AE001544	E50HU3100M	CE	10 UF 25 V
C711	AD301535	E02LU2101M	CE	100 UF 16V
C712	AE001544	E50HU3100M	CE	10 UF 25 V
C713	BZ110074	E50HU5010M	CE	1 UF 50V
C716	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C717	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C718	AE000332	E00NU2100M	CE	10 UF 16 V
C719	AE001544	E50HU3100M	CE	10 UF 25 V
C720	AE000332	E00NU2100M	CE	10 UF 16 V
C721	AE002126	CS0PB04E4K	CC	0.015 UF 50V B
C723	AE002495	CS0PB04W3K	CC	0.0082UF 50V B
C724	AE002495	CS0PB04W3K	CC	0.0082UF 50V B
C728	AE002822	CS0PB04E3K	CC	0.0015UF 50V B
C729	AE001729	CS0PCH412J	CC	100 PF 50V CH
C730	AE002822	CS0PB04E3K	CC	0.0015UF 50V B
C732	BZ110205	E02LU5220M	CE	22 UF 50V
C733	AE001729	CS0PCH412J	CC	100 PF 50V CH
C734	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C736	AD301535	E02LU2101M	CE	100 UF 16V
C737	AE002824	CS0PB04H4K	CC	0.022 UF 50V B
C740	AD301762	E50HU52R2M	CE	2.2 UF 50V
C742	AE001733	CS0PCH4H2J	CC	220 PF 50V CH
C743	BZ110143	E02LU0221M	CE	220 UF 6.3V
C745	BZ110205	E02LU5220M	CE	22 UF 50V
C746	AE001544	E50HU3100M	CE	10 UF 25 V
C747	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C748	AD301762	E50HU52R2M	CE	2.2 UF 50V
C749	AE000272	E50HU2470M	CE	47 UF 16V
C750	AD301535	E02LU2101M	CE	100 UF 16V
C752	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C754	AE000465	E00NU5010M	CE	1 UF 50 V
C757	AE001729	CS0PCH412J	CC	100 PF 50V CH
C758	AE001544	E50HU3100M	CE	10 UF 25 V
C759	AE001544	E50HU3100M	CE	10 UF 25 V
C760	AE001544	E50HU3100M	CE	10 UF 25 V
C761	BZ110074	E50HU5010M	CE	1 UF 50V
C764	AE002831	CS0PCH4Q2J	CC	470 PF 50V CH

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C766	AE002831	CS0PCH4Q2J	CC	470 PF 50V CH
C767	AE001544	E50HU3100M	CE	10 UF 25 V
C790	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C791	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C801	AE006851	E631MQ471D	CE	470 UF 4V
C802	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C803	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C804	AE005076	E61UMQ331D	CE	330 UF 4V
C805	AE005076	E61UMQ331D	CE	330 UF 4V
C806	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C807	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C809	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C810	AE005076	E61UMQ331D	CE	330 UF 4V
C811	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C812	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C813	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C814	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C815	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C816	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C817	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C818	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C819	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C820	AE005077	E61UMQ470D	CE	47 UF 4V
C821	AE005077	E61UMQ470D	CE	47 UF 4V
C822	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C824	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C825	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C826	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C827	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C828	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C829	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C830	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C831	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C832	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C833	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C834	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C835	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C836	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C837	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C838	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C839	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C840	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C841	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C842	AE005444	E61UM0221D	CE	220 UF 6.3V
C843	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C853	AE001729	CS0PCH412J	CC	100 PF 50V CH
C854	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C855	AE004236	CS0PB0NQ5K	CC	0.47 UF 10V B
C858	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C859	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C860	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C861	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C862	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C863	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C864	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C865	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C866	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C867	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C868	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
C870	AE002830	CS0PCH4L1J	CC	33 PF 50V CH
C872	AE005076	E61UMQ331D	CE	330 UF 4V
C875	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C876	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C877	AE006851	E631MQ471D	CE	470 UF 4V
C879	AE005077	E61UMQ470D	CE	47 UF 4V
C880	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C881	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C882	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C883	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C884	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C885	AE001726	CS0PB0414K	CC	0.01 UF 50V B

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C886	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C887	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C888	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C889	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C890	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C891	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C892	AE005077	E61UMQ470D	CE	47 UF 4V
C893	AE005077	E61UMQ470D	CE	47 UF 4V
C894	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C895	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C896	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C897	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C898	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C899	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C901	AD301762	E50HU52R2M	CE	2.2 UF 50V
C902	AE001544	E50HU3100M	CE	10 UF 25 V
C903	AE002100	E50HU5R33M	CE	0.33 UF 50 V
C904	BZ110217	E50HU53R3M	CE	3.3 UF 50V
C905	AD301762	E50HU52R2M	CE	2.2 UF 50V
C906	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C907	AE002824	CS0PB04H4K	CC	0.022 UF 50V B
C908	AD301762	E50HU52R2M	CE	2.2 UF 50V
C909	AE001770	E50HU54R7M	CE	4.7 UF 50V
C910	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C911	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C912	AE000835	CS0PB03L4K	CC	0.033 UF 25V B
C913	AD301762	E50HU52R2M	CE	2.2 UF 50V
C914	AE002492	CS0PB02H5K	CC	0.22 UF 16V B
C915	AE002100	E50HU5R33M	CE	0.33 UF 50 V
C916	AE000838	CS0PB0N16K	CC	1 UF 10V B
C917	AE000838	CS0PB0N16K	CC	1 UF 10V B
C919	AE000336	E02LU1101M	CE	100 UF 10V
C941	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C942	AE000838	CS0PB0N16K	CC	1 UF 10V B
C943	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C944	AE000838	CS0PB0N16K	CC	1 UF 10V B
C945	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C946	AD301535	E02LU2101M	CE	100 UF 16V
C947	AE002123	CQGTF0416Z	CC	1 UF 50V F
C948	AE002123	CQGTF0416Z	CC	1 UF 50V F
C949	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C950	AE002123	CQGTF0416Z	CC	1 UF 50V F
C951	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C952	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C953	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C954	AD301535	E02LU2101M	CE	100 UF 16V
C1001	AE001544	E50HU3100M	CE	10 UF 25 V
C1002	AD301762	E50HU52R2M	CE	2.2 UF 50V
C1003	AD301762	E50HU52R2M	CE	2.2 UF 50V
C1004	79091383	CS0PCH4K2J	CC	270 PF 50V CH
C1005	79091383	CS0PCH4K2J	CC	270 PF 50V CH
C1010	AE000835	CS0PB03L4K	CC	0.033 UF 25V B
C1011	AE001544	E50HU3100M	CE	10 UF 25 V
C1013	AE002126	CS0PB04E4K	CC	0.015 UF 50V B
C1014	AE005067	CS0PB03N4K	CC	0.039 UF 25V B
C1015	AE000835	CS0PB03L4K	CC	0.033 UF 25V B
C1016	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C1018	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C1019	AE001544	E50HU3100M	CE	10 UF 25 V
C1020	AE001544	E50HU3100M	CE	10 UF 25 V
C1021	AE001544	E50HU3100M	CE	10 UF 25 V
C1022	AE005081	E62KU4220M	CE	22 UF 35V
C1023	AE001544	E50HU3100M	CE	10 UF 25 V
C1024	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C1025	AD301535	E02LU2101M	CE	100 UF 16V
C1026	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C1027	AE005081	E62KU4220M	CE	22 UF 35V
C1028	BZ110263	E50HU2220M	CE	22 UF 16 V
C1029	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C1030	AE001544	E50HU3100M	CE	10 UF 25 V
C1031	AE001544	E50HU3100M	CE	10 UF 25 V

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C1034	BZ110263	E50HU2220M	CE	22 UF 16 V
C1036	AD301762	E50HU52R2M	CE	2.2 UF 50V
C1037	BZ110263	E50HU2220M	CE	22 UF 16 V
C1038	AE001729	CS0PCH412J	CC	100 PF 50V CH
C1039	AE001729	CS0PCH412J	CC	100 PF 50V CH
C1040	AE002492	CS0PB02H5K	CC	0.22 UF 16V B
C1041	AE001544	E50HU3100M	CE	10 UF 25 V
C1042	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C1043	BZ110263	E50HU2220M	CE	22 UF 16 V
C1044	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C1045	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C1046	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C1047	BZ110263	E50HU2220M	CE	22 UF 16 V
C1048	AE002492	CS0PB02H5K	CC	0.22 UF 16V B
C1049	AE000272	E50HU2470M	CE	47 UF 16V
C1050	BZ110263	E50HU2220M	CE	22 UF 16 V
C1051	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C1052	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C1054	AE000332	E00NU2100M	CE	10 UF 16 V
C1055	AE000332	E00NU2100M	CE	10 UF 16 V
C1056	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C1057	AE002879	CS0PB03Q4K	CC	0.047 UF 25V B
C1058	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C1059	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C1060	AE002879	CS0PB03Q4K	CC	0.047 UF 25V B
C1061	BZ110028	E5EZT2102M	CE	1000 UF 16V
C1062	AD301762	E50HU52R2M	CE	2.2 UF 50V
C1063	AE000466	E02LU1221M	CE	220 UF 10V
C1065	AE000466	E02LU1221M	CE	220 UF 10V
C1066	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C1067	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2201	BZ110243	CQGTB0414K	CC	0.01 UF 50V B
C2202	BZ110243	CQGTB0414K	CC	0.01 UF 50V B
C2205	BZ110150	E50HU0101M	CE	100 UF 6.3V
C2301	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2302	AE001733	CS0PCH4H2J	CC	220 PF 50V CH
C2303	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C2304	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2305	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2306	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2307	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2308	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C2309	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2310	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C2311	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C2312	AE001731	CS0PCH4G2J	CC	180 PF 50V CH
C2314	AE003855	CS0PCH4B2J	CC	120 PF 50V CH
C2316	AE002824	CS0PB04H4K	CC	0.022 UF 50V B
C2318	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C2320	BZ210177	E02LU2470M	CE	47 UF 16V
C2321	BZ110229	E02LU4220M	CE	22 UF 35V
C2322	BZ210177	E02LU2470M	CE	47 UF 16V
C2323	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2324	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2325	79091097	E50HU2101M	CE	100 UF 16 V
C2326	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2329	BZ110263	E50HU2220M	CE	22 UF 16 V
C2330	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2331	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C2332	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2333	BZ110263	E50HU2220M	CE	22 UF 16 V
C2334	BZ110263	E50HU2220M	CE	22 UF 16 V
C2339	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C2603	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C2604	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C2605	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C2606	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C2607	AE002830	CS0PCH4L1J	CC	33 PF 50V CH
C2608	AE001768	E50HU0221M	CE	220 UF 6.3V
C2609	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2610	AE000837	CS0PB04U3K	CC	0.0068UF 50V B

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C2611	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2612	AE002824	CS0PB04H4K	CC	0.022 UF 50V B
C2613	AE001733	CS0PCH4H2J	CC	220 PF 50V CH
C2614	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2615	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2616	AE002831	CS0PCH4Q2J	CC	470 PF 50V CH
C2617	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2618	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2619	AE002832	CS0PCH4S2J	CC	560 PF 50V CH
C2620	AE000836	CS0PB04S3K	CC	0.0056UF 50V B
C2621	AE000836	CS0PB04S3K	CC	0.0056UF 50V B
C2622	AE000836	CS0PB04S3K	CC	0.0056UF 50V B
C2623	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2624	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C2625	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C2626	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2627	AE000835	CS0PB03L4K	CC	0.033 UF 25V B
C2628	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C2629	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C2630	AE000838	CS0PB0N16K	CC	1 UF 10V B
C2631	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C2632	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2633	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C2634	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2635	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C2636	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2637	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2638	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2639	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2640	BZ110150	E50HU0101M	CE	100 UF 6.3V
C2641	BZ110150	E50HU0101M	CE	100 UF 6.3V
C2642	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2643	AE001543	E50HU0470M	CE	47 UF 6.3V
C2644	AE001543	E50HU0470M	CE	47 UF 6.3V
C2645	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2646	AE001543	E50HU0470M	CE	47 UF 6.3V
C2647	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C2648	AE000838	CS0PB0N16K	CC	1 UF 10V B
C2654	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C2655	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C3001	AE006849	E61FT3331D	CE	330 UF 25V
C3002	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3004	AE000838	CS0PB0N16K	CC	1 UF 10V B
C3005	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3006	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C3007	AE002831	CS0PCH4Q2J	CC	470 PF 50V CH
C3008	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C3009	AE000838	CS0PB0N16K	CC	1 UF 10V B
C3011	AE006849	E61FT3331D	CE	330 UF 25V
C3012	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C3014	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C3015	AE006850	E61FU0331D	CE	330 UF 6.3V
C3016	AE002708	E5EZU2101M	CE	100 UF 16V
C3017	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C3018	AE001737	CS0PF0N16Z	CC	1 UF 10V F
C3019	AE005070	E5EZU0221M	CE	220 UF 6.3V
C3020	AE006850	E61FU0331D	CE	330 UF 6.3V
C3021	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C3022	AE002708	E5EZU2101M	CE	100 UF 16V
C3023	AE002708	E5EZU2101M	CE	100 UF 16V
C3024	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C3025	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3032	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C3801	BZ110207	E02LT2102M	CE	1000 UF 16V
C3802	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3803	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3804	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3805	BZ110207	E02LT2102M	CE	1000 UF 16V
C3806	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3807	AE000840	CS0PCH4K1J	CC	27 PF 50V CH
C3808	AE004235	CS0PB04G4K	CC	0.018 UF 50V B

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C3809	BZ110083	E02LU3101M	CE	100 UF 25V
C3810	BZ110041	E02LT3471M	CE	470 UF 25V
C3811	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C3812	BZ110041	E02LT3471M	CE	470 UF 25V
C3813	AE005071	E61FT2681D	CE	680 UF 16V
C3814	AE000336	E02LU1101M	CE	100 UF 10V
C3815	BZ110083	E02LU3101M	CE	100 UF 25V
C3816	AD301535	E02LU2101M	CE	100 UF 16V
C3817	AE002831	CS0PCH4Q2J	CC	470 PF 50V CH
C3818	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C3819	AE002492	CS0PB02H5K	CC	0.22 UF 16V B
C3820	AE002492	CS0PB02H5K	CC	0.22 UF 16V B
C3821	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3822	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C3823	AE002492	CS0PB02H5K	CC	0.22 UF 16V B
C3824	AE002492	CS0PB02H5K	CC	0.22 UF 16V B
C3825	AE000467	E02LU54R7M	CE	4.7 UF 50V
C3826	AE004477	CS0PB03H5K	CC	0.22 UF 25V B
C3827	AE004477	CS0PB03H5K	CC	0.22 UF 25V B
C3828	AE000467	E02LU54R7M	CE	4.7 UF 50V
C3829	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C3830	AE002124	CS0PB0315K	CC	0.1 UF 25V B
C3831	AE001727	CS0PB04H3K	CC	0.0022UF 50V B
C4001	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4002	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4003	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4004	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4005	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4006	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4007	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4008	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4010	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4011	AE000336	E02LU1101M	CE	100 UF 10V
C4012	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4013	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4014	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4016	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4017	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4018	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4019	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4020	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4022	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4023	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4024	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4025	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4026	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4027	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4028	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4029	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4030	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4031	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C4032	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C4033	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4034	AE004237	CS0PCH450C	CC	5 PF 50V CH
C4035	AE004238	CS0PCH4F1J	CC	16 PF 50V CH
C4036	AE002825	CS0PCH411D	CC	10 PF 50V CH
C4037	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4038	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C4039	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4040	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4041	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4042	AE002825	CS0PCH411D	CC	10 PF 50V CH
C4045	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4046	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4047	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4050	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4051	BZ110143	E02LU0221M	CE	220 UF 6.3V
C4052	BZ110143	E02LU0221M	CE	220 UF 6.3V
C4056	AE002825	CS0PCH411D	CC	10 PF 50V CH
C4062	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4063	BZ110143	E02LU0221M	CE	220 UF 6.3V

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C4064	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4067	BZ210177	E02LU2470M	CE	47 UF 16V
C4068	AE003896	E5EZU2470M	CE	47 UF 16V
C4069	AE003896	E5EZU2470M	CE	47 UF 16V
C4070	AE003896	E5EZU2470M	CE	47 UF 16V
C4071	AE003896	E5EZU2470M	CE	47 UF 16V
C4072	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4073	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4074	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4075	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4076	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4077	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4078	AE000336	E02LU1101M	CE	100 UF 10V
C4081	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4082	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C4083	AE000336	E02LU1101M	CE	100 UF 10V
C4085	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C4086	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C4088	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C4089	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C4090	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C4093	AE001729	CS0PCH412J	CC	100 PF 50V CH
C4094	AE001729	CS0PCH412J	CC	100 PF 50V CH
C4095	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C4096	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C4099	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C7002	AE005069	CS0SB03Q6K	CC	4.7 UF 25V B
C7003	AE005069	CS0SB03Q6K	CC	4.7 UF 25V B
C7004	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C7005	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C7006	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C7008	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C7009	AE000838	CS0PB0N16K	CC	1 UF 10V B
C7010	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C7011	AE000838	CS0PB0N16K	CC	1 UF 10V B
C7012	AE006848	CS0PCH4U2H	CC	680 PF 50V CH
C7013	AE005068	CS0PB0415K	CC	0.1 UF 50V B
C7014	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C7016	AE004234	CS0PB02L5K	CC	0.33 UF 16V B
C7017	AE000838	CS0PB0N16K	CC	1 UF 10V B
C7019	AE001725	CS0PB0413K	CC	0.001 UF 50V B
C7020	AE005068	CS0PB0415K	CC	0.1 UF 50V B
C7021	AE005068	CS0PB0415K	CC	0.1 UF 50V B
C7022	AE005068	CS0PB0415K	CC	0.1 UF 50V B
C7023	AE002130	CS0PCH4Q1J	CC	47 PF 50V CH
C7024	AE002130	CS0PCH4Q1J	CC	47 PF 50V CH
C7025	AE002130	CS0PCH4Q1J	CC	47 PF 50V CH
C7026	AE002130	CS0PCH4Q1J	CC	47 PF 50V CH
C7038	AE005069	CS0SB03Q6K	CC	4.7 UF 25V B
C7039	AE005069	CS0SB03Q6K	CC	4.7 UF 25V B
C7040	AE001726	CS0PB0414K	CC	0.01 UF 50V B
C8504	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C8505	AE003854	CS0PCH4B1J	CC	12 PF 50V CH
C8506	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C8507	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C8508	AE003854	CS0PCH4B1J	CC	12 PF 50V CH
C8509	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C8510	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C8511	AE003854	CS0PCH4B1J	CC	12 PF 50V CH
C8512	AE001730	CS0PCH4E2J	CC	150 PF 50V CH
C8519	AE000336	E02LU1101M	CE	100 UF 10V
C8520	AE001275	CS0PF0415Z	CC	0.1 UF 50V F
C8521	AD301348	E02LU5100M	CE	10 UF 50V
C8522	BZ110189	E02LU0471M	CE	470 UF 6.3V
C8523	BZ110189	E02LU0471M	CE	470 UF 6.3V
C8524	BZ110189	E02LU0471M	CE	470 UF 6.3V
C8564	AE002825	CS0PCH411D	CC	10 PF 50V CH
C8566	AE002130	CS0PCH4Q1J	CC	47 PF 50V CH
		DIODES		
D101	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D102	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		DIODES		
D103	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
D104	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D701	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D1001	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D1002	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D2202	AD301537	0021E5Q210	LED	LTL-1CHGE-002A
D2601	BZ410121	DDARDS1200	DIODE,SILICON	KDS120RTK
D2602	AE004646	DE5RB2R21X	DIODE ZENER	02DZ2.2-X(TH3ORION
D3001	AE004643	D28R1QS040	DIODE	EC31QS04-TE12L
D3002	AE004642	D28R03A040	DIODE,SCHOTTKY	NSQ03A04-TE16L
D3003	AE004643	D28R1QS040	DIODE	EC31QS04-TE12L
D3801	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D3802	BZ410033	D28T21DQN4	DIODE,SCHOTTKY	21DQ04N-TA2B1
D3804	BZ410058	D97U08R21B	DIODE,ZENER	MTZJ8.2B T-77
D3805	AE006060	D28T0ERB20	DIODE,RECTIFIER	10ERB20-TA1B2
D3806	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D3807	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D4002	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
D7001	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
D7002	AE004645	DD7R002220	DIODE,SILICON	DAN222_TL
D7005	AE004645	DD7R002220	DIODE,SILICON	DAN222_TL
D7006	AE004645	DD7R002220	DIODE,SILICON	DAN222_TL
D7009	AE004644	D97R133010	DIODE ZENER	PTZTE2533B
D7010	AE004645	DD7R002220	DIODE,SILICON	DAN222_TL
D8508	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
D8509	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
D8510	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
		ICS		
IC101	AE006852	I55D06080B	IC	OEC6080B
IC103	BZ611122	I9UF032450	IC	PST3245NR
IC199	AE006857	S5N006CE01	MEMORY DATA	BR24L08F-WE2
IC601	AD301927	I0UF015040	IC	MM1504XNRE
IC701	AE001295	I0QJ045800	IC	NJM4580M(TE1)
IC702	BZ611139	I0QF02534V	IC	NJM2534V(TE2)
IC703	AD301988	I0UF015010	IC	MM1501XNRE
IC704	AE004651	I0QF025840	IC	NJM2584AM(TE1)
IC801	AE006853	I55M0288B0	IC	TC90288BXBG
⚠IC802	AE004654	I1KF98D330	IC	KIA78D33F
IC803	AE004660	IFKJ0LM850	IC	DTC34LM85AL
⚠IC804	AE006395	I0GF91ZPH0	IC	PQ070XZ01ZPH
⚠IC805	AE006395	I0GF91ZPH0	IC	PQ070XZ01ZPH
⚠IC806	AE004654	I1KF98D330	IC	KIA78D33F
IC901	AE004647	I01FF58320	IC	AN5832SA-E1V
IC903	AD301988	I0UF015010	IC	MM1501XNRE
IC904	AD301988	I0UF015010	IC	MM1501XNRE
IC905	BZ611139	I0QF02534V	IC	NJM2534V(TE2)
IC906	BZ611139	I0QF02534V	IC	NJM2534V(TE2)
IC1001	AD301983	I01FF58910	IC	AN5891SA-E1V
⚠IC1002	AE004649	I03DP49150	IC	LA4915-E
IC1004	AE002504	I0QF0580V0	IC	NJM4580V(TE1)
IC2301	AE000100	I06F030180	IC	M63018FP
IC2304	AD301770	I07E00358F	IC	BA10358F-E2
IC2601	AE000841	ICQK067070	IC	ZR36707TQC
⚠IC3001	AE004650	I07F097430	IC	BA9743AFV-E2
⚠IC3002	AE006395	I0GF91ZPH0	IC	PQ070XZ01ZPH
⚠IC3003	AE004653	I1KF98D050	IC	KIA78D05F
IC3801	AE004656	I1LF010100	IC	AL1010
⚠IC3803	AE004653	I1KF98D050	IC	KIA78D05F
⚠IC3804	AE004655	I1KF98R090	IC	KIA78R09F
IC3805	AE004648	I03D979950	IC	LA7995M-TLM
IC4001	AE003586	ICQK06762V	IC	ZR36762PQCG_V
IC4002	AE006854	I57J0L04F0	IC	BR24L04F-WE2
IC4005	AE006855	IFQJ0A6BE6	IC	EDS6416AHTA-6B-E
IC4007	AE006858	S5N006CF01	MEMORY DATA	SST39VF800A-70-4C-EKE
IC7002	AE004652	I1GF0TH120	IC	TH12A
IC8502	AE003584	I17F017530	IC	PCM1753DBQR
		TRANSISTORS		
Q101	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q105	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q601	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q602	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		TRANSISTORS		
Q603	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q604	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q701	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q702	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q703	BZ510021	TNYJC05001	COMPOUND TRANSISTOR	DTC124EKAT146
Q704	BZ510045	TNYJD05001	COMPOUND TRANSISTOR	DTC144EKAT146
Q707	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q708	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q709	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q710	BZ510081	TPYJA05001	COMPOUND TRANSISTOR	DTA143EKAT146
Q711	BZ510045	TNYJD05001	COMPOUND TRANSISTOR	DTC144EKAT146
Q801	BZ510020	TNYJB05001	COMPOUND TRANSISTOR	DTC114EKAT146
Q802	AE004661	T77J011320	TRANSISTOR,SILICON	2SB1132T100(Q,R)
Q1001	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q1002	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q1003	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q1005	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q1006	BZ510081	TPYJA05001	COMPOUND TRANSISTOR	DTA143EKAT146
Q1007	AE004662	T93A018020	TRANSISTOR,SILICON	2SD1802S/T-TL-E
Q1008	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q2601	BZ510112	T67J1036K0	TRANSISTOR,SILICON	2SA1036KT146
Q2602	AE003592	T67J048TL0	TRANSISTOR,SILICON	2SA2048TL
Q2603	BZ510113	T27T030180	FET	2SK3018T106
Q2604	BZ510113	T27T030180	FET	2SK3018T106
Q2605	BZ510113	T27T030180	FET	2SK3018T106
Q2606	AE005938	TNRAC05003	COMPOUND TRANSISTOR	RT1N241C-T1
Q3001	AE004661	T77J011320	TRANSISTOR,SILICON	2SB1132T100(Q,R)
Q3002	BZ510020	TNYJB05001	COMPOUND TRANSISTOR	DTC114EKAT146
Q3003	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q3004	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q3005	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q3006	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
⚠Q3007	AE004663	TJ5M081090	FET	TPC8109(T2LORION_Q)
⚠Q3008	AE004663	TJ5M081090	FET	TPC8109(T2LORION_Q)
Q3801	AE004665	TS3M000044	COMPOUND TRANSISTOR	CPH6312-TL-E
Q3802	BZ510021	TNYJC05001	COMPOUND TRANSISTOR	DTC124EKAT146
Q3803	BZ510020	TNYJB05001	COMPOUND TRANSISTOR	DTC114EKAT146
Q3804	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q3805	BZ510049	TPYJD05001	COMPOUND TRANSISTOR	DTA144EKAT146
Q3806	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q3807	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q7001	AE004664	TS3M000040	COMPOUND TRANSISTOR	FW256-TL-E
Q7002	AE004664	TS3M000040	COMPOUND TRANSISTOR	FW256-TL-E
Q7003	AE002626	T8YJ2412K0	TRANSISTOR,SILICON	2SC2412KT146 R,S
Q7004	AE002626	T8YJ2412K0	TRANSISTOR,SILICON	2SC2412KT146 R,S
Q8507	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
		COILS &TRANSFORMERS		
L001	AD300613	02167F150J	COIL	15 UH
L003	AE005592	0216S8330K	COIL	F 33 UH
L004	BZ310041	02167F101J	COIL	100 UH
L101	BZ310040	02167F470J	COIL	47 UH
L102	BZ310040	02167F470J	COIL	47 UH
L602	AE004601	0216SD1R5J	COIL	1.5 UH
L603	AE005283	0216S8101K	COIL	F 100 UH
L604	AE005058	0216S4220J	COIL	22 UH
L608	AE005060	0216SDR56J	COIL	0.56 UH
L609	AE004601	0216SD1R5J	COIL	1.5 UH
L701	BZ310040	02167F470J	COIL	47 UH
L703	BZ310041	02167F101J	COIL	100 UH
L705	BZ310039	02167F220J	COIL	22 UH
L713	BZ310181	02A6B2E0A1	CORE,FERRITE	HF70T22*10*14
L804	AE005285	0216S8470K	COIL	F 47 UH
L805	AE005285	0216S8470K	COIL	F 47 UH
L806	AE005285	0216S8470K	COIL	F 47 UH
L817	AE005284	0216S8220K	COIL	F 22 UH
L819	AE005284	0216S8220K	COIL	F 22 UH
L840	AD301539	02AHB0A0A4	CORE,FERRITE	W5T_20X10X10A
L901	BZ310041	02167F101J	COIL	100 UH
L904	AE002183	021LA6470J	COIL	47 UH
L905	BZ310040	02167F470J	COIL	47 UH
L1001	BZ310041	02167F101J	COIL	100 UH

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		COILS &TRANSFORMERS		
L1003	BZ310181	02A6B2E0A1	CORE,FERRITE	HF70T22*10*14
L1004	AE004595	021404221M	COIL	21A 220 UH
L2201	AD301539	02AHB0A0A4	CORE,FERRITE	W5T_20X10X10A
L3001	AE004593	021404101L	COIL	1A 100 UH
L3002	AE004593	021404101L	COIL	1A 100 UH
L3003	BZ310191	02167F2R2J	COIL	2.2 UH
L3004	BZ310150	02167E220K	COIL	R7 22 UH
L3801	AE004594	021404150M	COIL	50A 15 UH
L3802	AD301785	02167E100K	COIL	R6-1 10 UH
L3803	BZ310150	02167E220K	COIL	R7 22 UH
L4001	AE004601	0216SD1R5J	COIL	1.5 UH
L8502	AE000828	02167F1R0K	COIL	1 UH
L8503	AE000828	02167F1R0K	COIL	1 UH
L8504	AE000828	02167F1R0K	COIL	1 UH
⚠T7001	AE004605	048117001H	TRANSFORMER,SWITCHING	CRT-025
⚠T7002	AE004605	048117001H	TRANSFORMER,SWITCHING	CRT-025
⚠T7003	AE004604	045532001H	TRANSFORMER,SWITCHING	AW-HA284T
⚠T7004	AE004604	045532001H	TRANSFORMER,SWITCHING	AW-HA284T
		JACKS		
J701	AE003568	060J401102	RCA JACK	MSP-251V-05NI-FE-LF
J702	AE002949	060J421036	RCA JACK	MTJ-032-05A-30-FE
J703	AE002950	060J421037	RCA JACK	MTJ-032-05A-32-FE
J704	AE002951	060J421030	RCA JACK	MTJ-032-05A-31-FE
J705	AE002951	060J421030	RCA JACK	MTJ-032-05A-31-FE
J706	AE004334	063D700009	JACK	MDC-070V-A_LF
J707	AE005146	060J421043	RCA JACK	MTJ-032-05A-29-FE
J708	AE005147	060J421044	RCA JACK	MTJ-032-05A-50-FE
J790	AE002949	060J421036	RCA JACK	MTJ-032-05A-30-FE
J791	AE002950	060J421037	RCA JACK	MTJ-032-05A-32-FE
J792	AE002951	060J421030	RCA JACK	MTJ-032-05A-31-FE
⚠J1001	AE002426	0602131008	HEADPHONE JACK	HSJ0913-01-140
⚠J3801	BZ614145	0602602006	JACK DC	HEC0824-010010
		SWITCHES		
SW2202	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2204	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2206	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2208	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2209	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2251	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2252	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2253	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2254	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2255	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
		P.C.BOARD ASSEMBLIES		
PCB130	AE006841	A5N006C130	PCB ASS'Y	DMD005B
PCB270	AE006842	A5N006C270	PCB ASS'Y	CED005A
PCB340	AE006843	A5N006C340	PCB ASS'Y	CED006B
PCB350	AE006844	A5N006C350	PCB ASS'Y	CED007C
PCBD20	AE006845	A5N006CD20	PCB ASS'Y	CMD002B
PCBD90	AE006846	A5N006CD90	PCB ASS'Y	CED003B
PCBDA0	AE006847	A5N006CDA0	PCB ASS'Y	CED004B
		MISCELLANEOUS		
⚠AD001	AE006331	0411030086	AC,ADAPTER	11030086
B701	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B702	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B801	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B803	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B2301	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B2601	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B2602	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B2603	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B2604	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B2605	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B3001	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B3801	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B3802	BZ310129	024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B3803	BZ310122	024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2
B4001	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4002	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4003	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4004	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		MISCELLANEOUS		
B4005	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4006	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4007	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4008	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4009	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4010	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B8503	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
BL001	BZ310014	023C00022A	COIL BALUN	HPN-01
BT001	AE005640	141R004016	BATTERY,MANGAN	GR03X-SP2
BT002	AE005640	141R004016	BATTERY,MANGAN	GR03X-SP2
CD101	AE005064	06CU232601	CORD,CONNECTOR	CU232601
CD102	AE004633	122H0K2401	CORD,JUMPER	2H0K2401
CD103	AE004632	122H072403	CORD,JUMPER	2H072403
⚠CD501	AE006833	06C3241402	CORD,CONNECTOR	C3241402
⚠CD503	AE004631	120G119903	CORD,SET AC	0G119903
CD701	AE006837	06C32G1002	CORD,CONNECTOR	C32G1002
CD705	AE006835	06C3281602	CORD,CONNECTOR	C3281602
CD802	AE004620	06DU20001A	CORD,EIS CONNECTOR	DU20001A
CD804	AE006834	06C3261504	CORD,CONNECTOR	C3261504
CD807	AE006832	06C3223003	CORD,CONNECTOR	C3223003
CP101	BZ614350	069S230629	CONNECTOR PCB SIDE	A2001WV2-3P
CP102	AE006830	069EVK3030	CONNECTOR PCB SIDE	00_6232_020_006_800+
CP103	AE006574	069EV73030	CONNECTOR PCB SIDE	00_6232_007_006_800+
CP104	BZ614416	069S220629	CONNECTOR PCB SIDE	A2001WV2-2P
CP701	AE004336	069S2G0629	CONNECTOR PCB SIDE	A2001WV2-16P
CP703	AD301998	069S240629	CONNECTOR PCB SIDE	A2001WV2-4P
CP705	AD301796	069S280629	CONNECTOR PCB SIDE	A2001WV2-8P
CP801	AE004610	069S2K0679	CONNECTOR PCB SIDE	A2006WR0-2X10P
CP805	AE006831	069EVK3050	CONNECTOR PCB SIDE	00_6232_020_102_800+
CP806	AE006575	069EV73050	CONNECTOR PCB SIDE	00_6232_007_102_800+
CD2201	AE005065	06CU252001	CORD,CONNECTOR	CU252001
CD2601	AE001699	122H0O1902	CORD,JUMPER	2H0O1902
CD7001	AE006836	06C3282602	CORD,CONNECTOR	C3282602
CP1001	AD301045	069S140419	CONNECTOR PCB SIDE	A2502WV2-4P
CP2201	AD300752	069S250629	CONNECTOR PCB SIDE	A2001WV2-5P
CP2301	AE006524	069EV93030	CONNECTOR PCB SIDE	00_6232_009_006_800+
CP2302	AE006525	069EVC3030	CONNECTOR PCB SIDE	00_6232_012_006_800+
CP2601	AE003571	069GYOT119	CONNECTOR PCB SIDE	09-5000-024-001-001
⚠CP3803	AD301796	069S280629	CONNECTOR PCB SIDE	A2001WV2-8P
⚠CP3804	AD301998	069S240629	CONNECTOR PCB SIDE	A2001WV2-4P
CP3805	BZ614242	069S260629	CONNECTOR PCB SIDE	A2001WV2-6P
CP7002	AE004611	069X32T01A	CONNECTOR PCB SIDE	SM02(8.0)B-BHS-1
CP7003	AE004611	069X32T01A	CONNECTOR PCB SIDE	SM02(8.0)B-BHS-1
CP7004	AE005062	069X92T159	CONNECTOR PCB SIDE	S2B-ZR-SM3A-TF(LF)
CP7005	AE005062	069X92T159	CONNECTOR PCB SIDE	S2B-ZR-SM3A-TF(LF)
CUS911	BZ710279	800WFAA006	CUSHION A	
CUS912	BZ710149	800WFAA008	CUSHION C	
⚠F3001	AE004626	083LA05007	FUSE	1206FA5A-T
⚠F7001	AE004625	083LA04007	FUSE	1206FA4A-T
⚠ICP3801	AE004624	0835C05003	MICRO FUSE	20N_5000FS
NR801	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR802	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR803	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR804	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR805	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR806	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR822	AE005937	110P4470M4	R,NETWORK	4D03WGJ0470T5E
NR823	AE005937	110P4470M4	R,NETWORK	4D03WGJ0470T5E
OS2201	AE004623	0773071006	REMOTE RECEIVER	RPM7138-SH8
⚠SP1001	AE006838	070Y836004	SPEAKER	S0407N04-A
TM101	AE006839	076D0LB010	TRANSMITTER	ORT203N7304458-U
⚠TU001	AE006829	0162300045	RF UNIT	115-V-LA35AR
⚠V2301	AE006840	09EA114003	LCD	T140VN01
X101	BZ613019	1002T01606	CERAMIC OSCILLATOR	CSTLS16M0X53-A0
X601	AE004628	100DT04201	CRYSTAL	SMD-49
X4001	AD301803	100BT02701	CRYSTAL	HC-49U/S

ELECTRICAL REPLACEMENT PARTS LIST

RESISTOR

RC.....	CARBON RESISTOR

CAPACITORS

CC.....	CERAMIC CAPACITOR
CE.....	ALUMI ELECTROLYTIC CAPACITOR
CP.....	POLYESTER CAPACITOR
CPP.....	POLYPROPYLENE CAPACITOR
CPL.....	PLASTIC CAPACITOR
CMP.....	METAL POLYESTER CAPACITOR
CMPL.....	METAL PLASTIC CAPACITOR
CMPP.....	METAL POLYPROPYLENE CAPACITOR

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

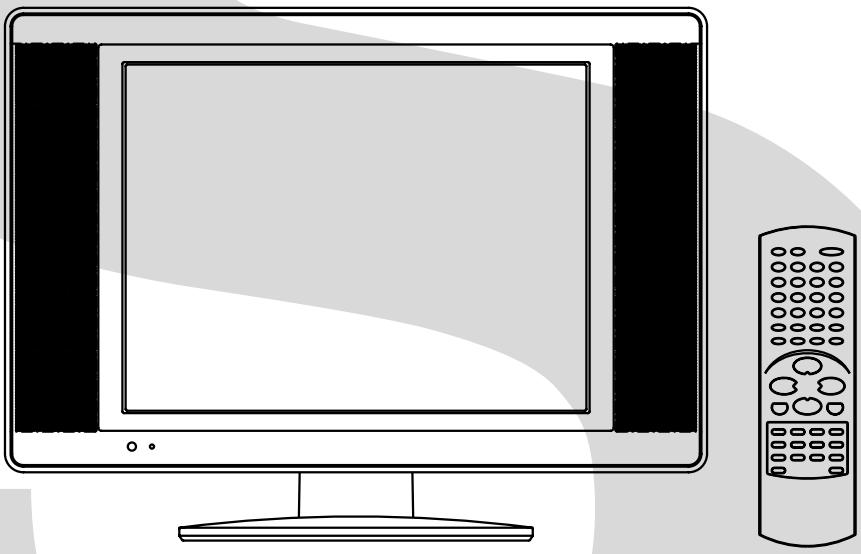
TOSHIBA

FILE NO. 810-200514

CIRCUIT DIAGRAMS

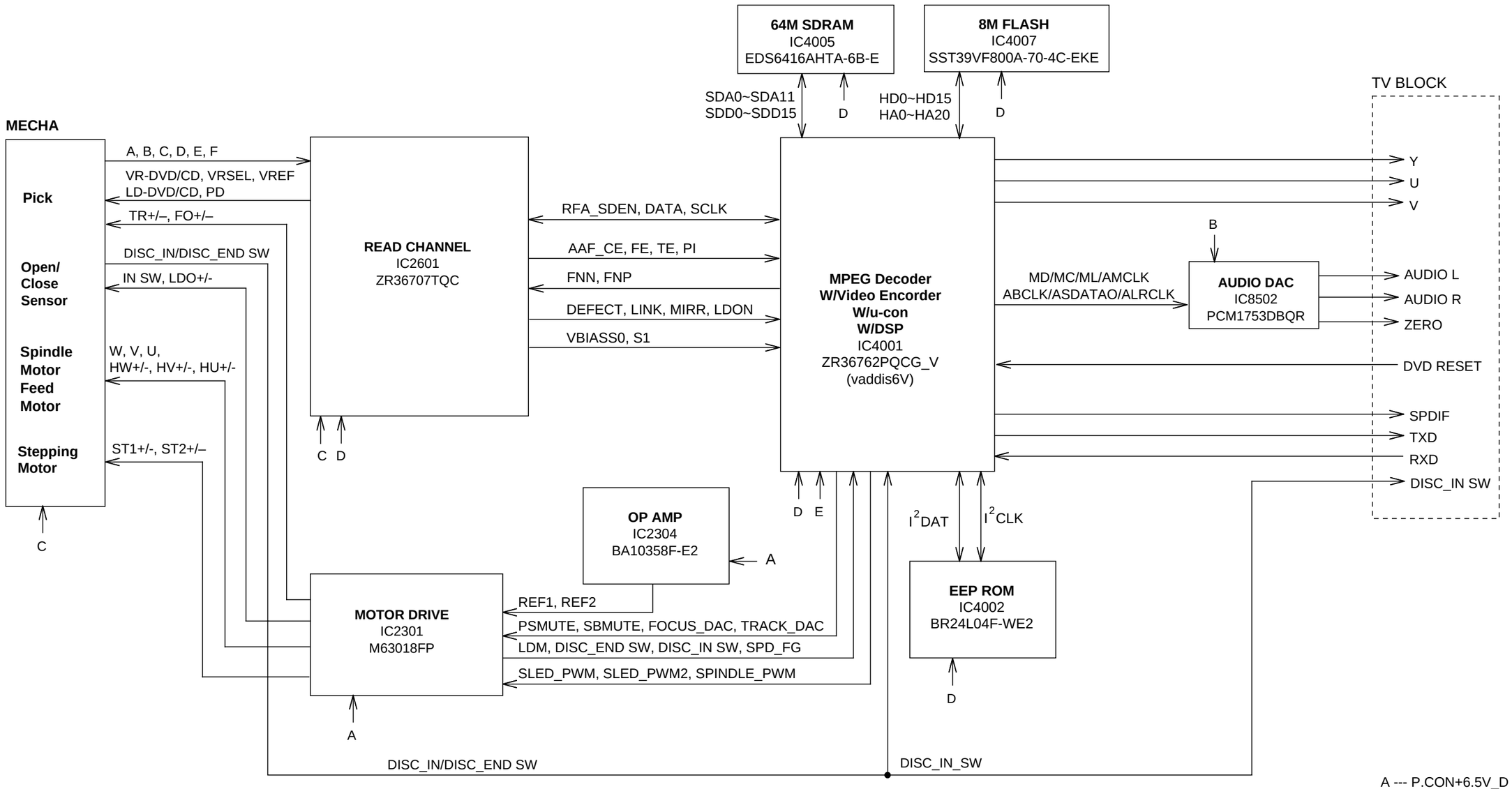
14-inch LCD TV/DVD COMBINATION

14DLV75



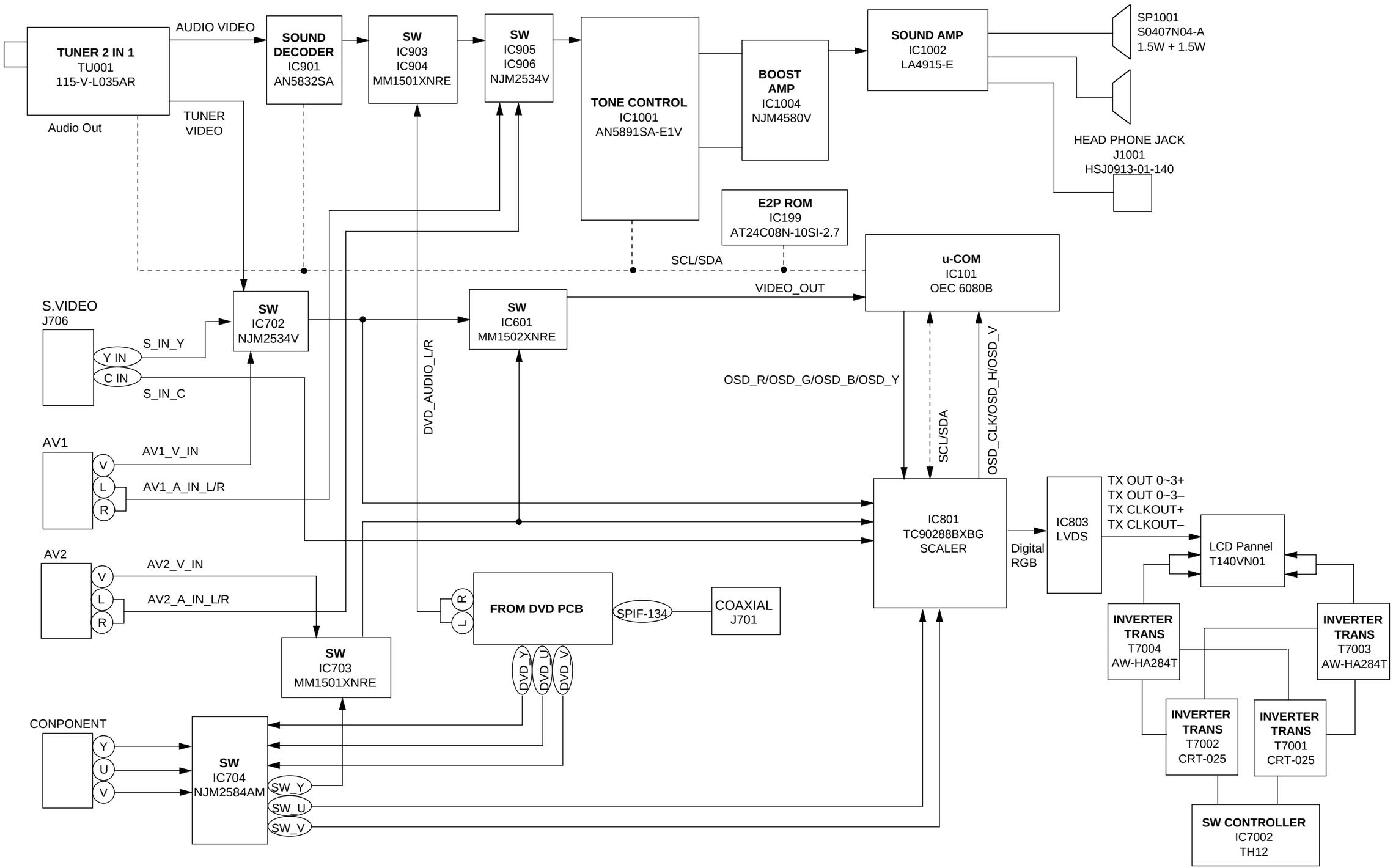
DOCUMENT CREATED IN JAPAN, February, 2005

DVD BLOCK DIAGRAM

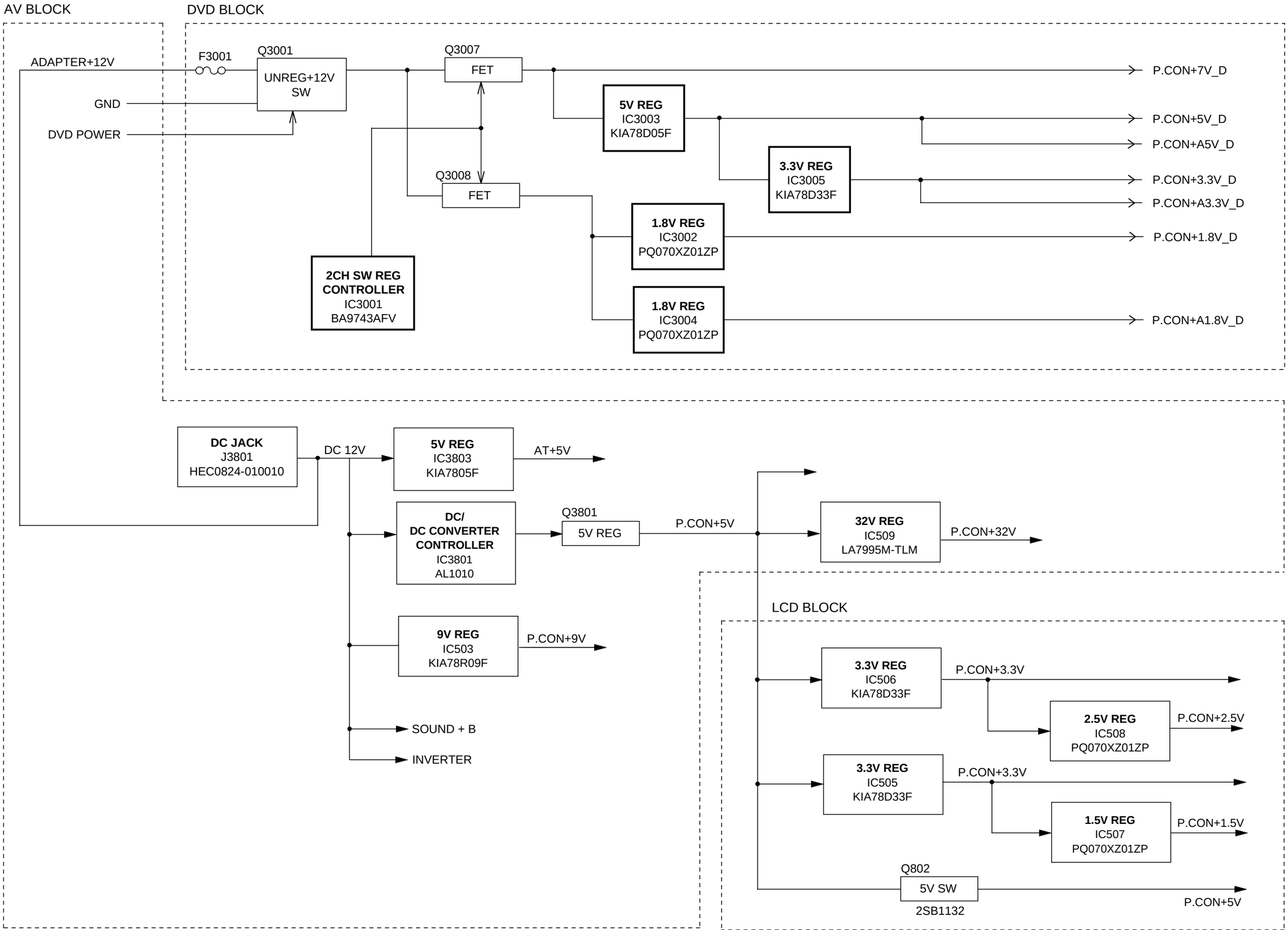


A --- P.CON+6.5V_D
B --- P.CON+5V_D
C --- P.CON+A5V_D
D --- P.CON+3.3V_D
E --- P.CON+1.8V_D

TV BLOCK DIAGRAM

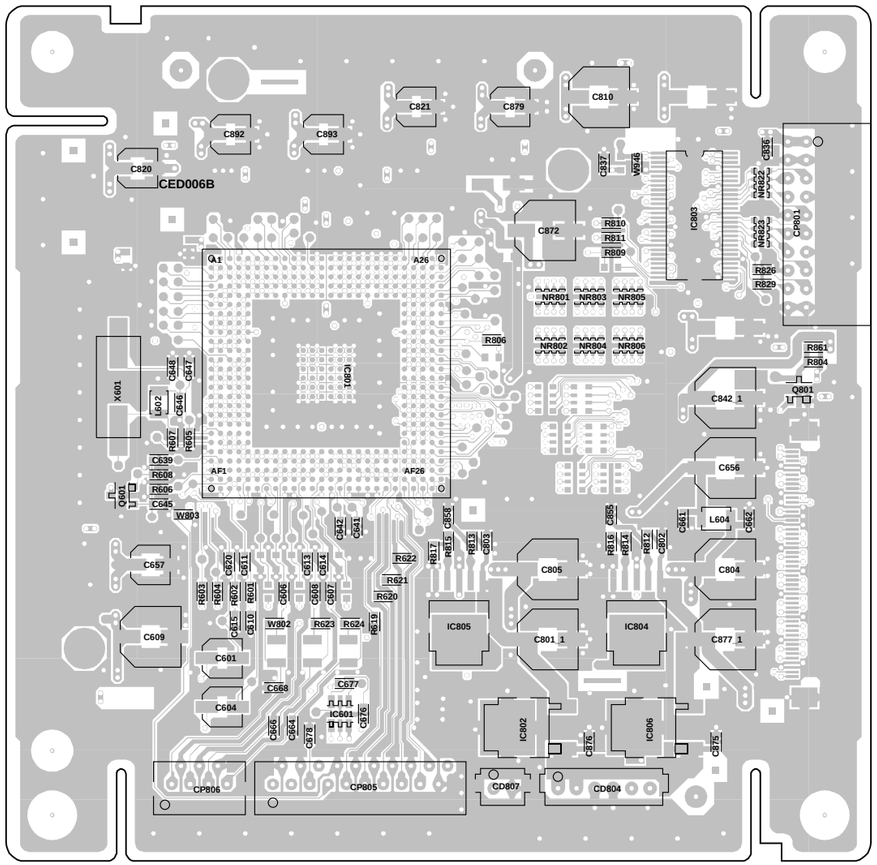


POWER BLOCK DIAGRAM

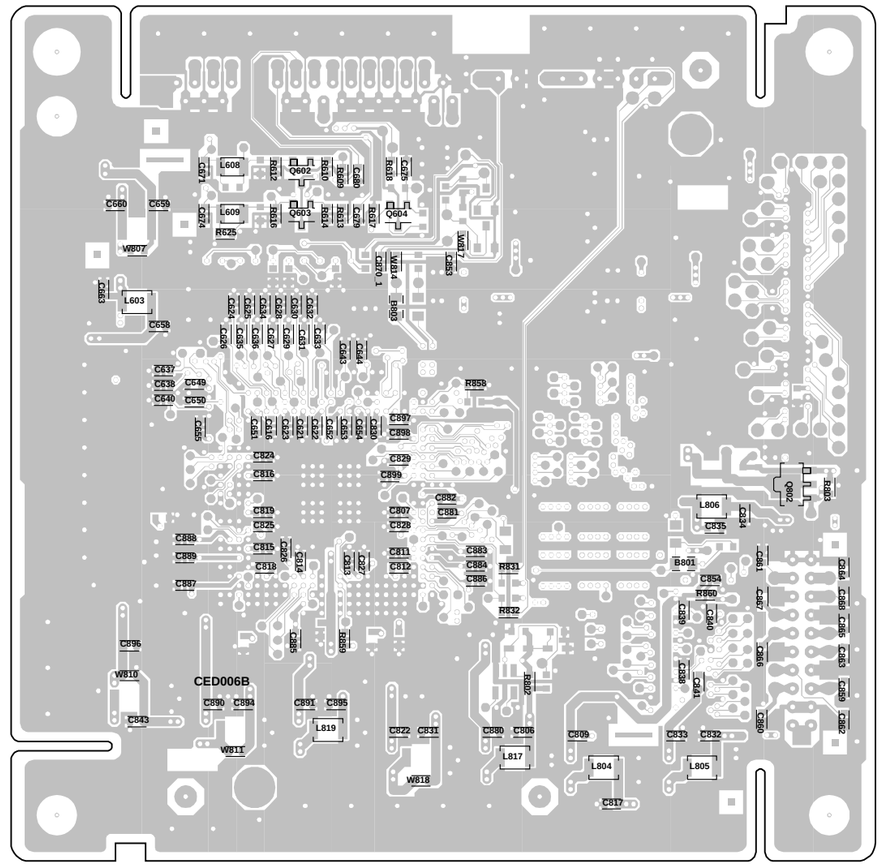


PRINTED CIRCUIT BOARDS

LCD (TOP SIDE)

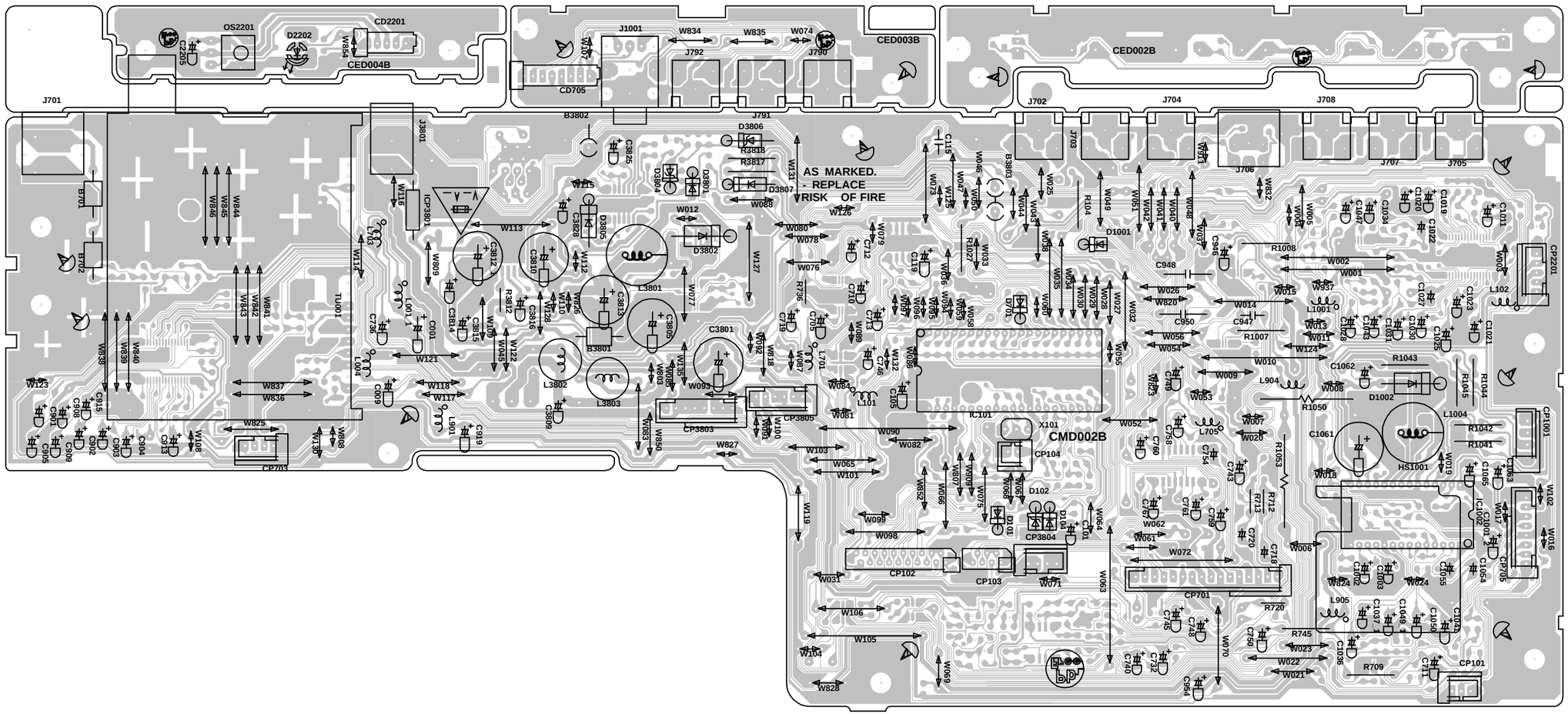


LCD (BOTTOM SIDE)



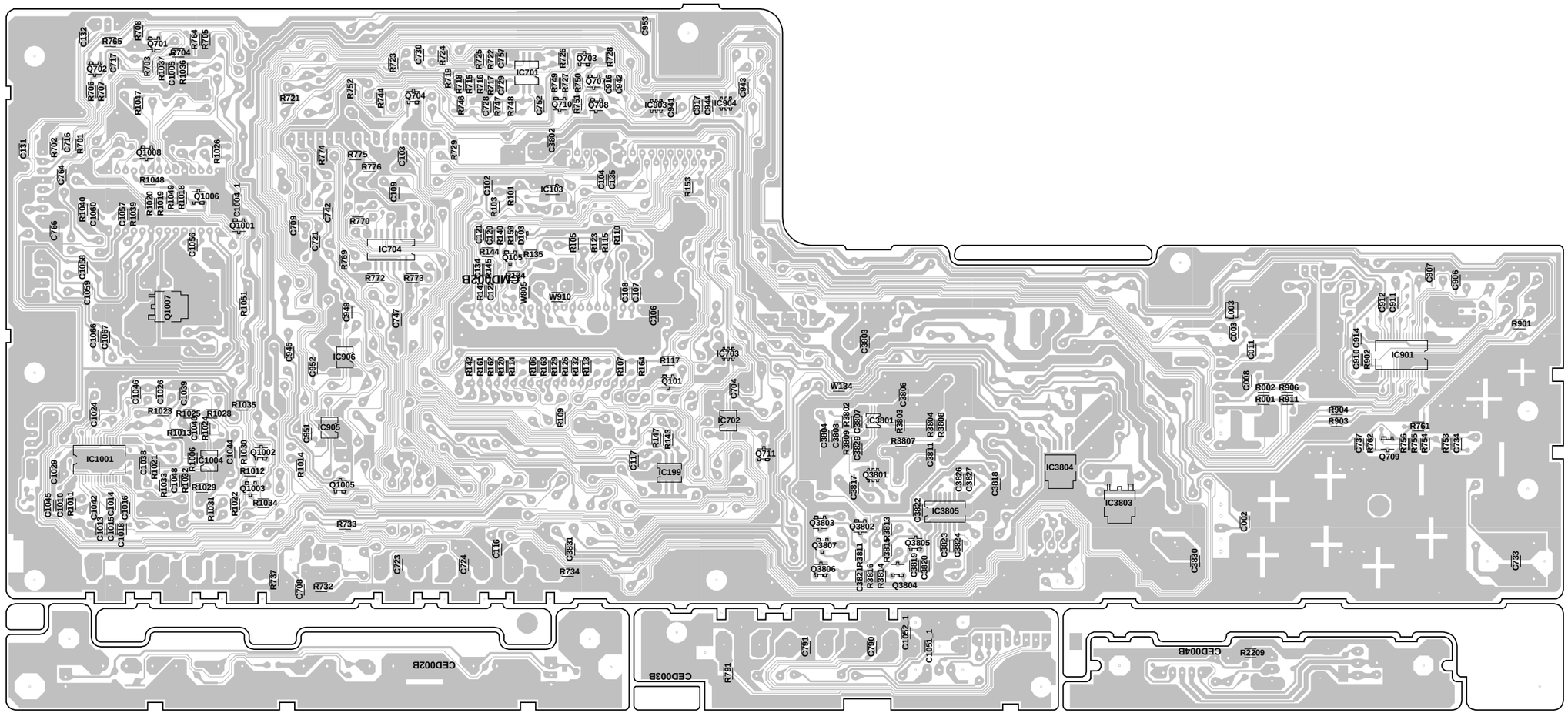
AV/REMOCON/SIDE JACK (INSERTED PARTS)

SOLDER SIDE



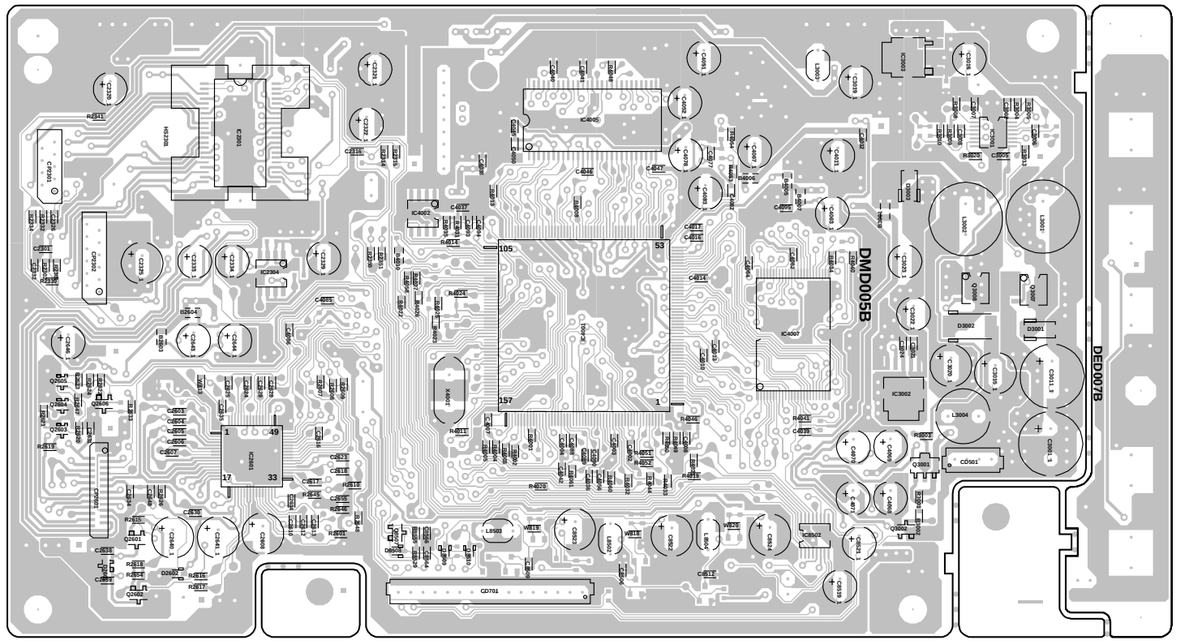
AV/REMOCON/SIDE JACK (CHIP MOUNTED PARTS)

SOLDER SIDE

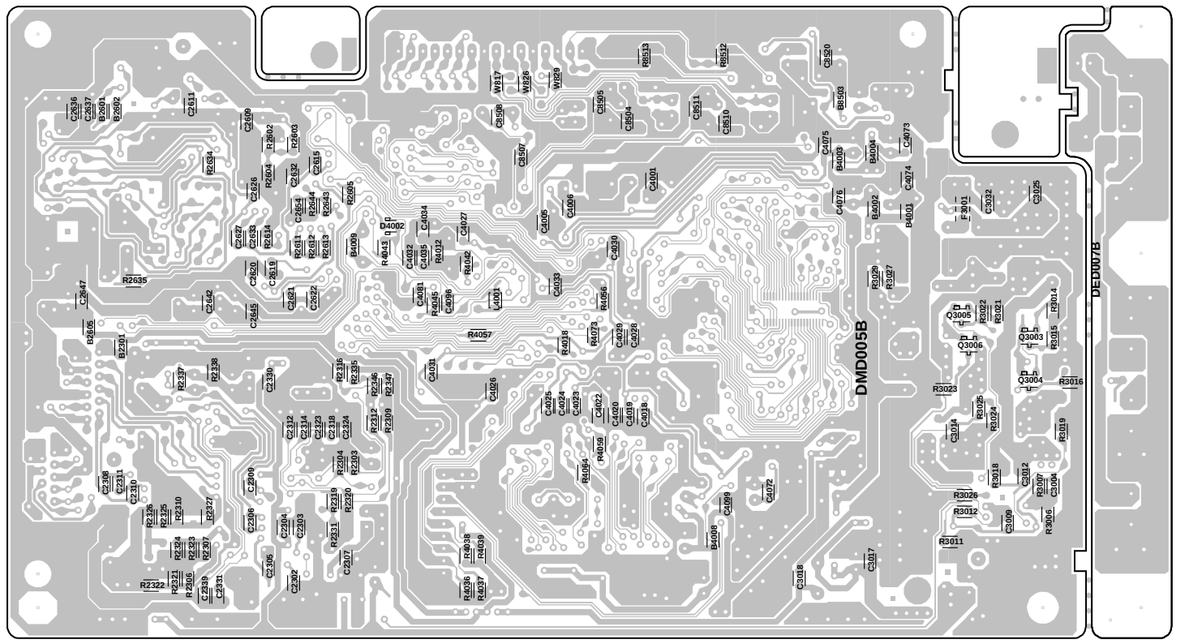


PRINTED CIRCUIT BOARDS

DVD (TOP SIDE)

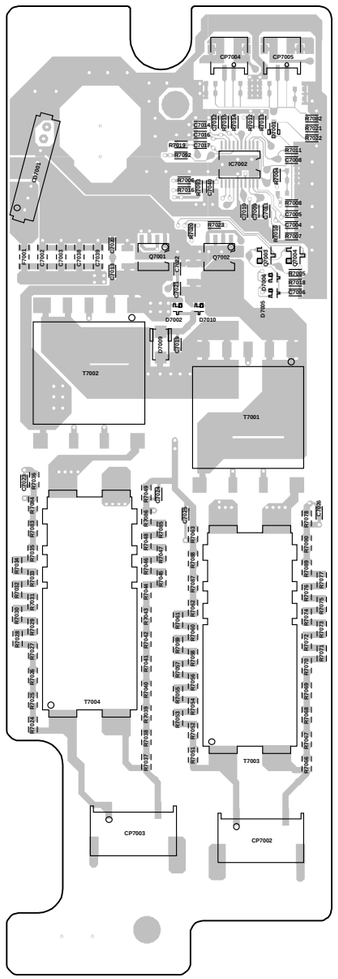


DVD (BOTTOM SIDE)

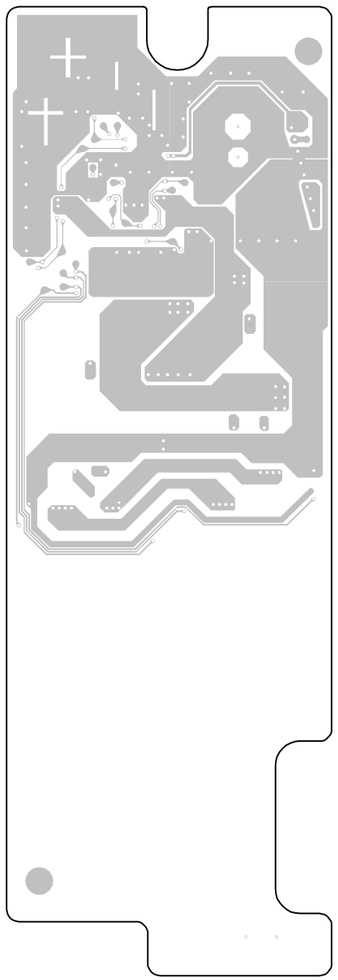


PRINTED CIRCUIT BOARDS

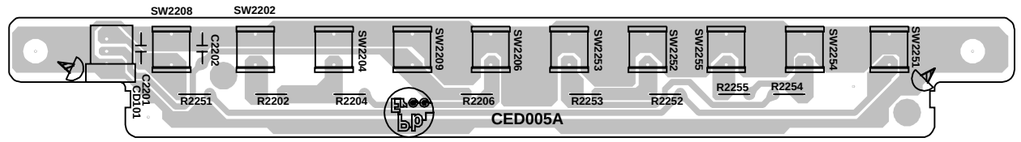
BACK LIGHT (TOP SIDE)



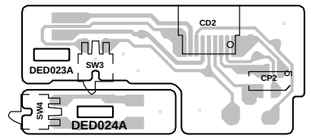
BACK LIGHT (BOTTOM SIDE)



OPERATION
SOLDER SIDE

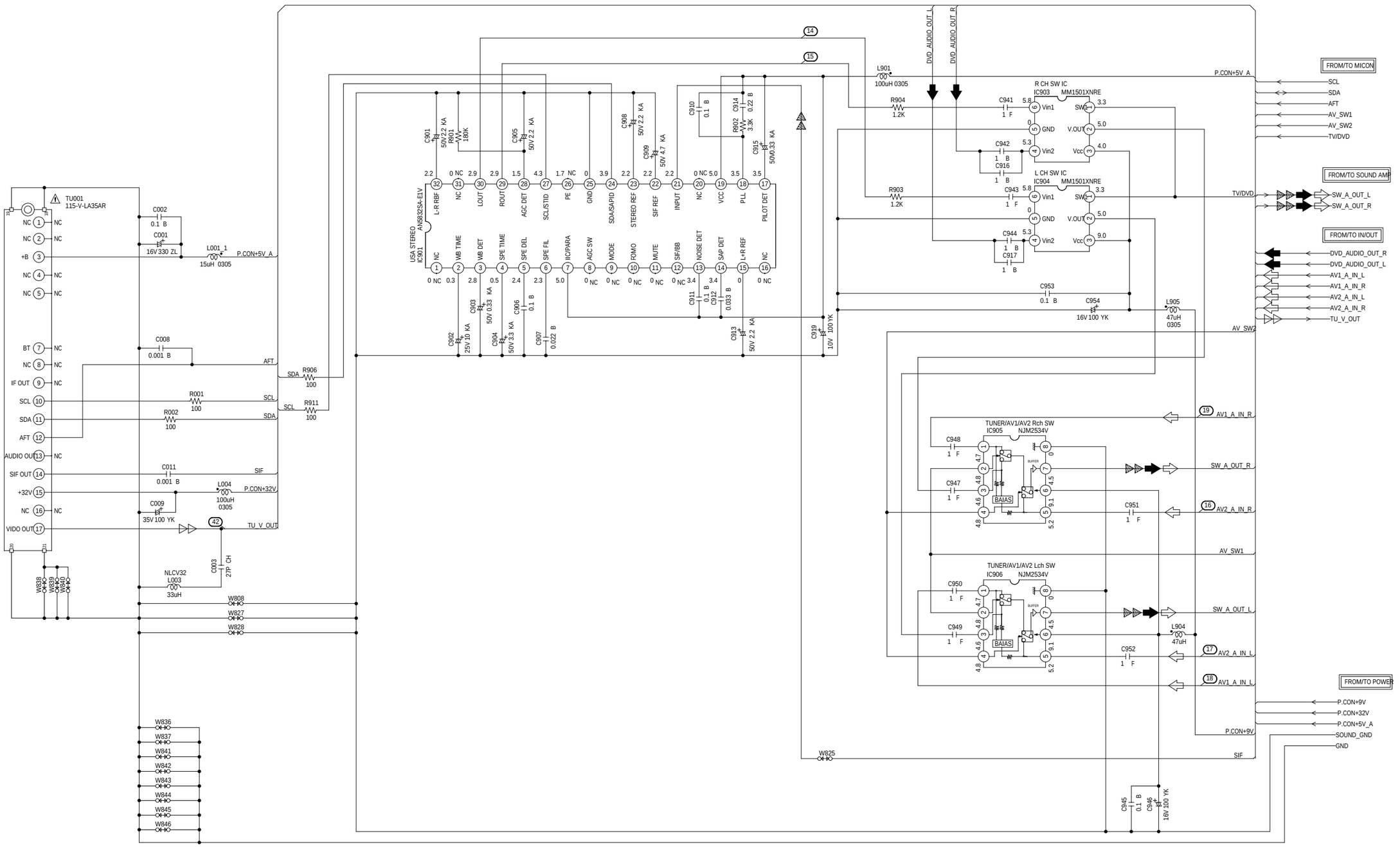


START SW/END SW
SOLDER SIDE



TUNER/STEREO SCHEMATIC DIAGRAM

(AV PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

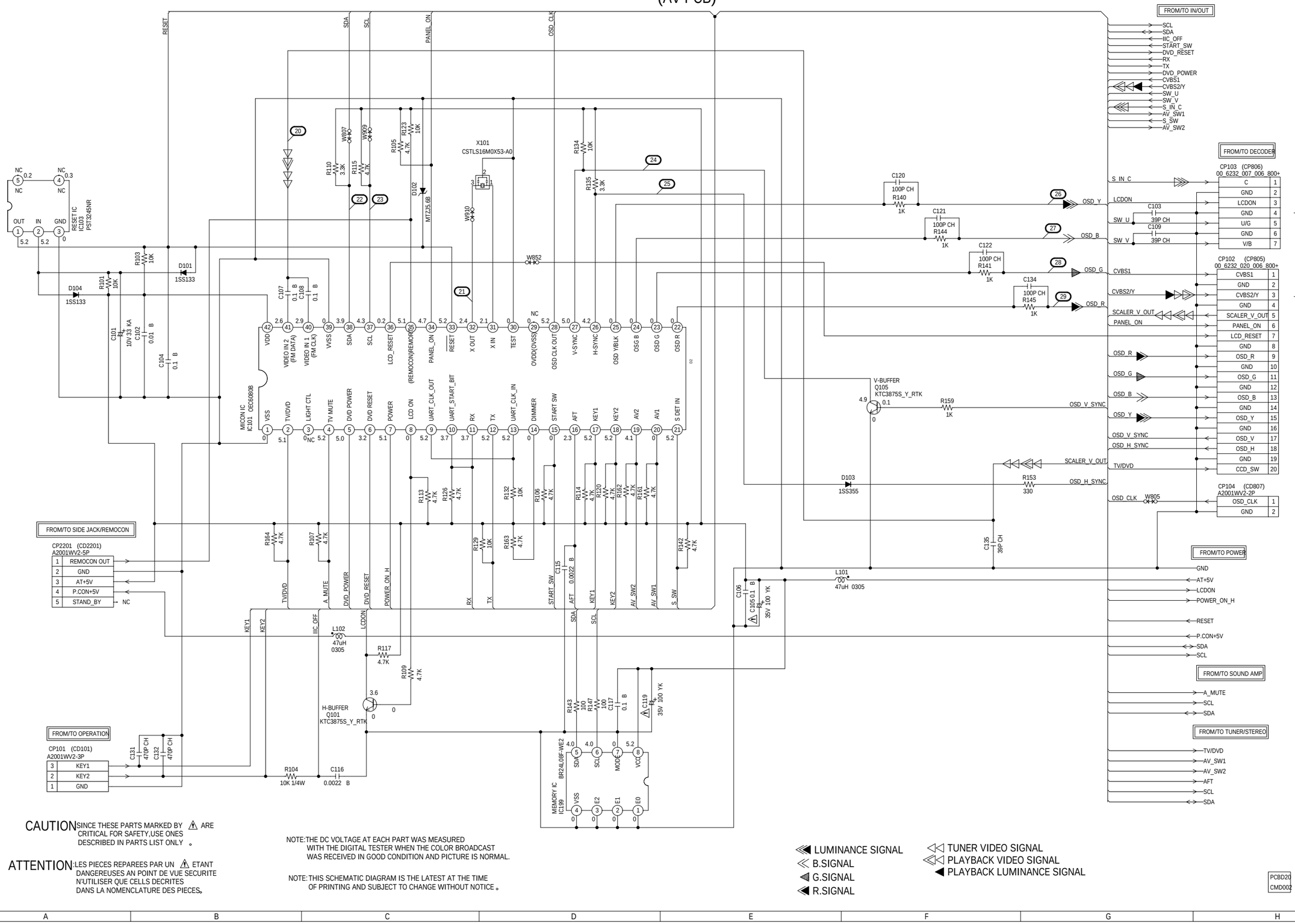
ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

TUNER VIDEO SIGNAL
AUDIO SIGNAL
TUNER AUDIO SIGNAL
AUDIO SIGNAL(PB)

PCBD20
CMD002

MICON SCHEMATIC DIAGRAM

(AV PCB)



CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION:LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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LUMINANCE SIGNAL
B.SIGNAL
G.SIGNAL
R.SIGNAL
TUNER VIDEO SIGNAL
PLAYBACK VIDEO SIGNAL
PLAYBACK LUMINANCE SIGNAL

SOUND AMP SCHEMATIC DIAGRAM

(AV PCB)

IC1002 LA4915-E SOUND AMP

POWER GND · IN1 · IN-VREF · PRE VCC · PRE GND · IN2 · ON TIME · DDL · D.C · AMP S.B. · HP S.B. · HP D.C · HP IN2 · HP IN1

OUT1- · OUT1+ · VCC · SW OUT · SW E · SW B · SW GND · OUT2+ · OUT2- · POWER GND · HP OUT2 · HP OUT1

R1053 3.9 3W

R1026 6.8K · C1002 50V2.2 KA · C1003 50V2.2 KA

R1036 6.8K · C1036 50V2.2 KA · C1037_1 16V22 KA

C1049_1 16V47 KA · C1050 16V22 KA · C1054 16V10 KANP · C1055 16V10 KANP

R1037 12K · R1020 12K

MUTE_SW Q1008 KTC3875S_Y_RTK · R1047 10K · C1041 25V 10 KA · R1018 5.6K · R1048 5.6K · R1049 10K

C1056 0.001 B · C1066 · R1044 2.2 1/2W 0.1 B · R1050 2.7 5W · R1045 2.2 1/2W 0.1 B · C1067

C1061 16V 1000 MHE

C1062 · R1043 50V2.2 KA 2.2 · D1002 1/2W · SBPSC L1004 · L1005 220uH · 21DQ09N

Q1007 2SD1802S/T SW

C1058 R1041 0.1 B 2.2 1/2W · C1059 R1042 0.1 B 2.2 1/2W · C1063 10V220 YK · C1065 10V220 YK

C1057 0.047 B · R1039 10 · C1060 0.047 B · R1040 10

HS80 HS1001 763WSA0032

C1001_2 KA10 25V

C1004_1 270P CH · C1005_1 270P CH

R1019 1.5K · MUTE SW Q1006 DTA143EKA

MUTE_SW Q1001 KTC3875S_Y_RTK · R1051 10K

AUDIO MUTE SW Q1002 KTC3875S_Y_RTK · R1012 1K

W824 · W937

L1003 HF70T22*10*14

CP1001 A2502WV2-4P

SP OUT R+	1	1	16 OHM
SP GND	2	2	
SP GND	3	3	
SP OUT L+	4	4	16 OHM

SP1001_1 S0407N04-A

32 · 33 · 31 · 30

FROM/TO POWER: P.CON+5V · SOUND+B · P.CON+9V · GND · SOUND_GND · AT+5V

FROM/TO MICON: A_MUTE · SCL · SCA

FROM/TO TUNER/STEREO: SW_A_OUT_L · SW_A_OUT_R

FROM/TO IN/OUT: PHONE_OUT_L · PHONE_OUT_R · SP_MUTE

R1007 2.7K 1/4W · R1008 2.7K 1/4W

TONE CONTROL IC1001 AN5891SA-E1V

PF1 · AGC · L IN · NC · NC · PF2 · PF3 · PF4 · GND · LT · LB · NC · NC · BD · VD · L ONT

AGC · SURR · Tone Control · Volume Control · 2.2K · Balance /MUTE

MODE control · VCC · R IN · Vref · NC · NC · BB · RB · RT · BLD · TD · NC · NC · R OUT · SDA · SCL

C1011 25V10 KA · R1011 220K · C1010 0.033 B · C1042 1 F · C1013 0.015 B · C1014 0.039 B · C1015 0.033 B · C1016 0.01 B · C1018 0.1 B · C1019 · C1020 25V 10 KA

C1045 1 F · C1026 1 0.1B · C1046 1 F · C1029 0.01 B · C1030 25V 10 KA · C1031 25V10 KA

C1021 25V 10 KA · C1024 0.01 B · C1025 · C1022 35V 22 NA · C1027 35V22 NA

D1001 1SS133 · R1027 39K 1/4W · L1001 100uH 0305

SW Q1005 KTA1504S_Y_RTK · R1014 100

C1021 25V 10 KA · C1024 0.01 B · C1025 16V 100 YK · C1023 25V 10 KA

R1021 120K · C1038 100P CH · R1034 33K · R1022 1K

R1029 3.9K · C1034 16V22 KA · R1032 1.8K · R1033 820 · C1048 0.22 B · C1047 16V22 KA · R1031 12K

R1006 120K · R1013 120K · R1023 120K · C1039 100P CH · R1028 3.9K · C1028 16V22 KA · C1044 0.1 B · R1035 33K

R1025 4.7K · C1040 0.22 B · R1024 820 · C1043 16V 22 KA · R1030 12K

A_GND · VCC · MIXER IC1004 NJM4580V(TE1)

AUDIO MUTE SW Q1003 KTC3875S_Y_RTK

CAUTION: DIGITAL TRANSISTOR

AUDIO SIGNAL(PB) · TUNER AUDIO SIGNAL · AUDIO SIGNAL

PCBD2C CMD002

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

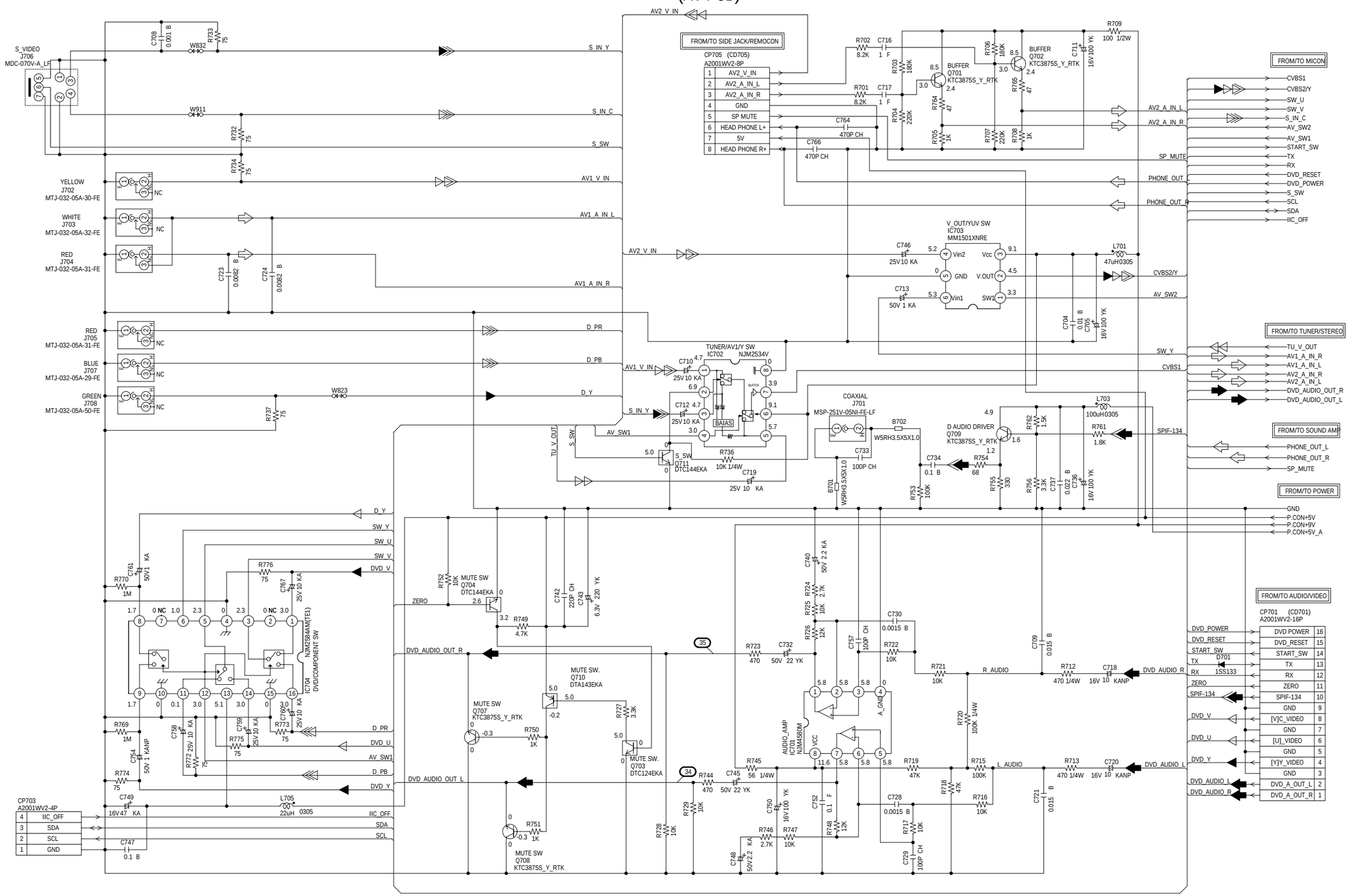
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

IN/OUT SCHEMATIC DIAGRAM

(AV PCB)



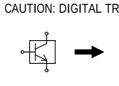
LUMINANCE SIGNAL
COLOR SIGNAL
PLAYBACK VIDEO SIGNAL
PLAYBACK LUMINANCE SIGNAL
R.SIGNAL
B.SIGNAL

AUDIO SIGNAL(PB)
G.SIGNAL
AUDIO SIGNAL
TUNER VIDEO SIGNAL
DIGITAL AUDIO SIGNAL(PB)
PLAYBACK COLOR SIGNAL

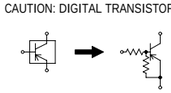
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR



PCBD20
CMD002

POWER SCHEMATIC DIAGRAM

(AV PCB)

FROM/TO INVERTER

CP3803 (CD7001)
A2001WV2-8P

8	LCD ON/OFF
7	I-PWM
6	GND(B.L)
5	GND(B.L)
4	GND(B.L)
3	V IN
2	V IN
1	V IN

FROM/TO REGULATOR2

CP3804 (CD501)
A2001WV2-4P

4	GND
3	GND
2	ADAPTER+12V
1	ADAPTER+12V

DC JACK
J3801
HEC0824-010010

5A 125V

ICP3801
20N_5000FS
5A 125V

AT5V REG
IC3803
KIA78D05F

P.CON9V REG
IC3804
KIA78R09F

P.CON32V REG
IC3805
LA7995M-TLM

10ERB20-TA1B2

Q3801
CPH6312-TL-E

5V CONTROL
AL1010 IC3801
VIN, V5/PWON, Vref/SS, CC, CS, EXT, GND, FB

Q3802
DTC124EKA

Q3803
DTC114EKA

Q3804
KTC3875S_Y_RTK

Q3805
DTA144EKA

Q3806
KTC3875S_Y_RTK

Q3807
KTC3875S_Y_RTK

D3801
1SS133

D3802
21DQ04N

D3804
MTZJ8.2B

D3806
MTZJ5.6B

D3807
1SS133

FROM/TO SOUND AMP
- SOUND+B
- AT+5V
- P.CON+5V
- P.CON+9V
- SOUND_GND
- GND

FROM/TO MICON
- LCDON
- POWER_ON_H
- AT+5V
- P.CON+5V
- RESET
- SDA
- SCL
- GND

FROM/TO TUNER/STEREO
- P.CON+32V
- P.CON+9V
- P.CON+5V_A
- SOUND_GND
- GND

FROM/TO IN/OUT
- P.CON+9V
- P.CON+5V
- P.CON+5V_A
- GND

FROM/TO DECODER

CP3805 (CD804)
A2001WV2-6P

5V	1
5V	2
GND	3
GND	4
SCL	5
SDA	6

B3801 W5RH3.5X5X1.0
B3802 W4BRH3.5X6X1.0
B3803 W4BRH3.5X6X1.0X2

W803 W809 W818 W820 W826 W850

L3802 10uH TSL0808
L3803 22uH TSL0808
L3801 15uH SBPSC

R3803 0.047 1/4W
R3804 0.047 1/4W
R3807 1.8K +-1%
R3808 30K +-1%
R3809 10K +-1%
R3811 10K
R3812 4.7K 1/4W
R3813 6.8K
R3814 3.3K
R3815 22K
R3816 27K
R3817 10K 1/4W
R3818 10K 1/4W

C3801 16V1000 YK
C3802 0.1 B
C3803 0.1 B
C3804 0.1 B
C3805 16V1000 YK
C3806 0.1 B
C3807 27P CH
C3808 0.018 B
C3809 25V 100 YK
C3810 25V 470 YK
C3811 0.001 B
C3812_1 25V470 YK
C3813 16V 680 FM
C3814 10V 100 YK
C3815 25V100 YK
C3816 16V 100 YK
C3817 470P CH
C3818 0.01 B
C3819 0.22 B
C3820 0.22 B
C3821 0.1 B
C3822 150P CH
C3823 0.22 B
C3824 0.22 B
C3825 50V 4.7 YK
C3826 0.22 B
C3827 0.22 B
C3829 0.01 B
C3830 0.1 B
C3831 0.0022 B

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 5A 125V (ICP3801)

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 5A 125V (ICP3801)

CAUTION: ICP3801 IS MANUFACTURED BY SKYGATE CO LTD., TYPE 20N

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

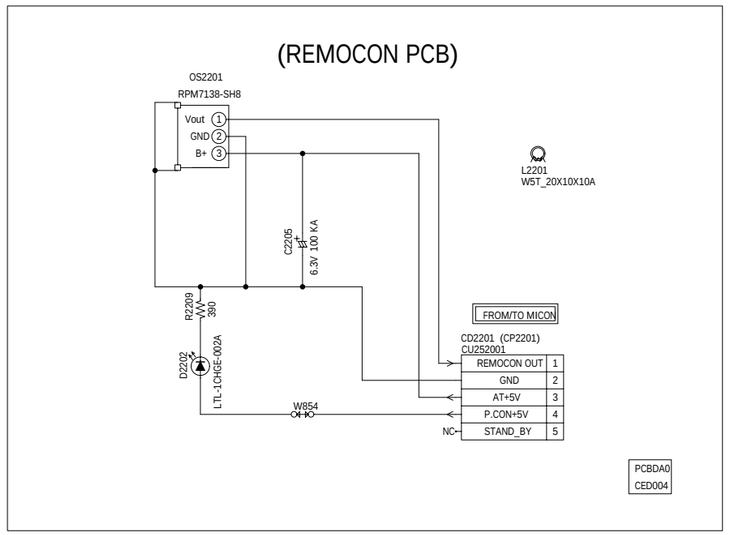
CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR

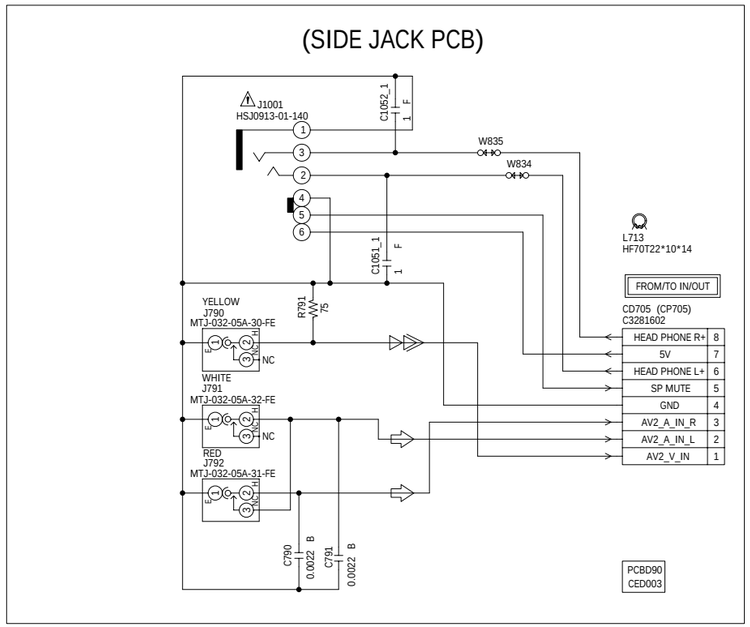
PCBD20
CMD002

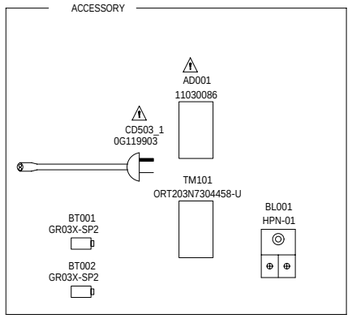
SIDE JACK/REMOCON SCHEMATIC DIAGRAM

(REMOCON PCB)



(SIDE JACK PCB)





NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

⇦ AUDIO SIGNAL(REC)
⇦⇦ PLAYBACK VIDEO SIGNAL

DECODER SCHEMATIC DIAGRAM

(LCD PCB)

FROM/TO POWER

CD804 (CP3805)
C3261504

1	5V
2	5V
3	GND
4	GND
5	SCL
6	SDA

P.CON3.3V REG
IC806
KIA78D33F

P.CON2.5V REG
IC804
PQ070XZ01ZPH

P.CON3.3V REG
IC802
KIA78D33F

P.CON1.8V REG
IC805
PQ070XZ01ZPH

FROM/TO MICON

CP806 (CP103)
00_6232_007_102_800+

1	C
2	GND
3	LCDON
4	GND
5	U/G
6	GND
7	V/B

CP805 (CP102)
00_6232_020_102_800+

1	CVBS1
2	GND
3	CVBS2/Y
4	GND
5	SCALER_V_OUT
6	PANEL_ON
7	LCD_RESET
8	GND
9	OSD_R
10	GND
11	OSD_G
12	GND
13	OSD_B
14	GND
15	OSD_Y
16	GND
17	OSD_V
18	OSD_H
19	GND
20	CCD_SW

CD807 (CP104) C3223003

1	OSD_CLK
2	GND

L840
WST_20X10X10A

AV SW IC
IC601 MM1504XNRE

BUFFER Q604 KTC3875S_Y_RTK

BUFFER Q603 KTC3875S_Y_RTK

BUFFER Q602 KTC3875S_Y_RTK

BUFFER Q601 KTC3875S_Y_RTK

SCALER
IC801 (1/5 DECODER)
TC90288BXBG

		Y3	YCLAMP2
		Y4	YCLAMP1
		AF4	Y_BIASAD
		AF5	YVREFT
		AF6	YAD_VSS
		AD5	CVBS1IN
		AB6	YAD_VDD
		AD7	CVBS2IN
		AB7	YVREFM
		AF7	YVREFB
		AB8	C_BIASAD
		AD8	CVREFT
		AF9	CAD_VSS
		AE9	CIN
		AB9	CAD_VDD
		AC9	GREENIN
		AD9	CVREFB
		AB10	C2_BIASAD
		AD10	C2VREFT
		AF10	C2AD_VSS
		AE11	CBIN
		AB11	C2AD_VDD
		AC11	BLUEIN
		AD11	C2VREFB
		AB12	C3_BIASAD
		AD12	C3VREFT
		AF13	C3AD_VSS
		AE13	CRIN
		AB13	C3AD_VDD
		AC13	REDIN
		AD14	C3VREFB
DA_VDD1	AE1		
DA_OUT1	AE2		
DABIAS11	AF3		
DAVREF1	AE3		
DA_GND1	AF2		
PLL1AVDD	AB5		
CKIN1	AC2		
FIL1	AC1		
PLL1AVSS	AD1		
XO_VDD	Y2		
XO_V_IN	Y1		
XO_V_OUT	AA1		
XO_VSS	AB1		
DA_DVDD1	AD2		
DA_DVSS1	AE4		
DA_OUT2	AC14		
DA_DVDD2	AC15		
DA_DVSS2	AB15		
DA_VDD2	AB14		
DA_GND2	AF14		
DABIAS21	AF15		
DABIAS22	AE15		
DAVREF2	AD15		
PLL2AVDD	AB16		
FIL2	AE16		
PLL2AVSS	AF16		

FROM/TO LVDS
GND
P.CON+3.3V
P.CON+5V
PANEL_ON

FROM/TO SCALER 2
GND
P.CON+3.3V
P.CON+2.5V
P.CON+1.5V
SCALER_V_OUT
SDA
SCL
RESET

FROM/TO SCALER 1
OSD_R
OSD_G
OSD_B
OSD_Y
OSD_V
OSD_H
OSD_CLK
GND

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION:LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

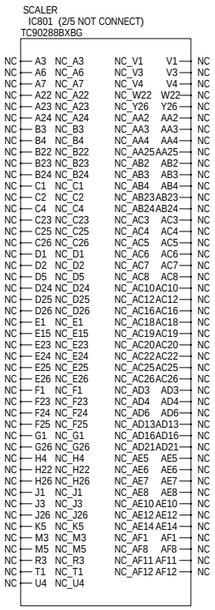
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

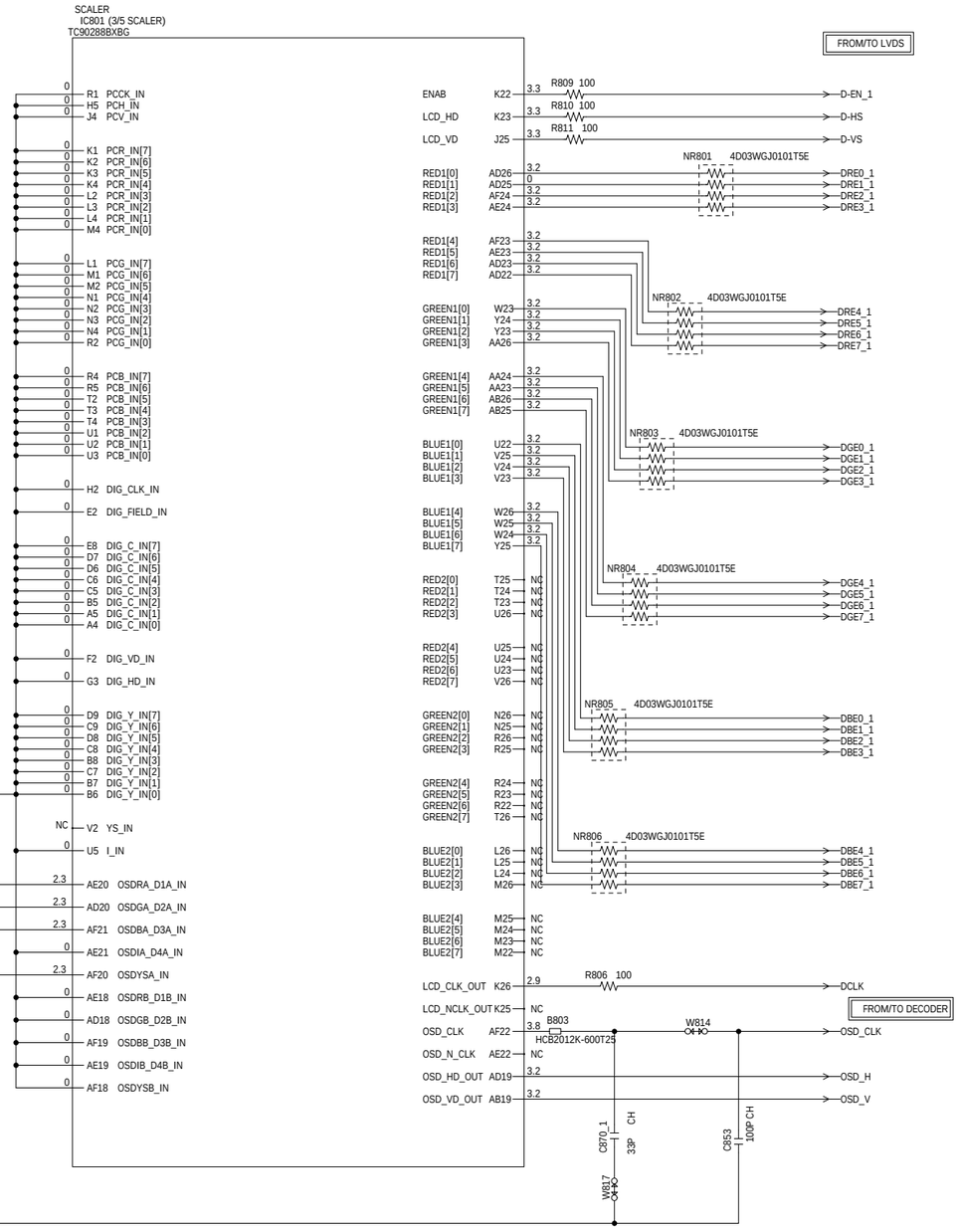
TUNER VIDEO SIGNAL
PLAYBACK VIDEO SIGNAL
PLAYBACK LUMINANCE SIGNAL
LUMINANCE SIGNAL
B.SIGNAL
G.SIGNAL
R.SIGNAL

PCB340
CED006

SCALER1 SCHEMATIC DIAGRAM

(LCD PCB)





LUMINANCE SIGNAL
B.SIGNAL
G.SIGNAL
R.SIGNAL

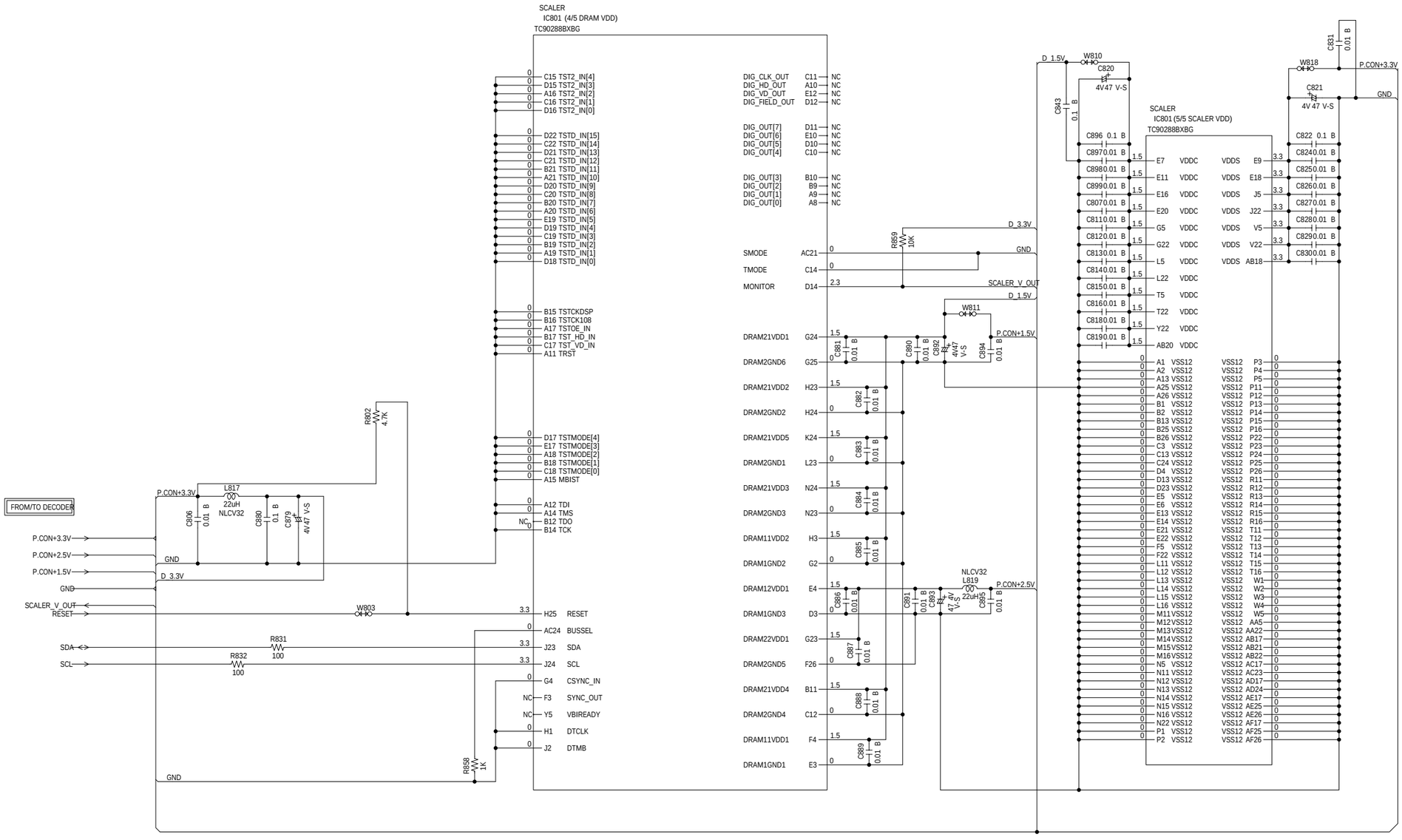
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

PCB340
CED006

SCALER2 SCHEMATIC DIAGRAM

(LCD PCB)



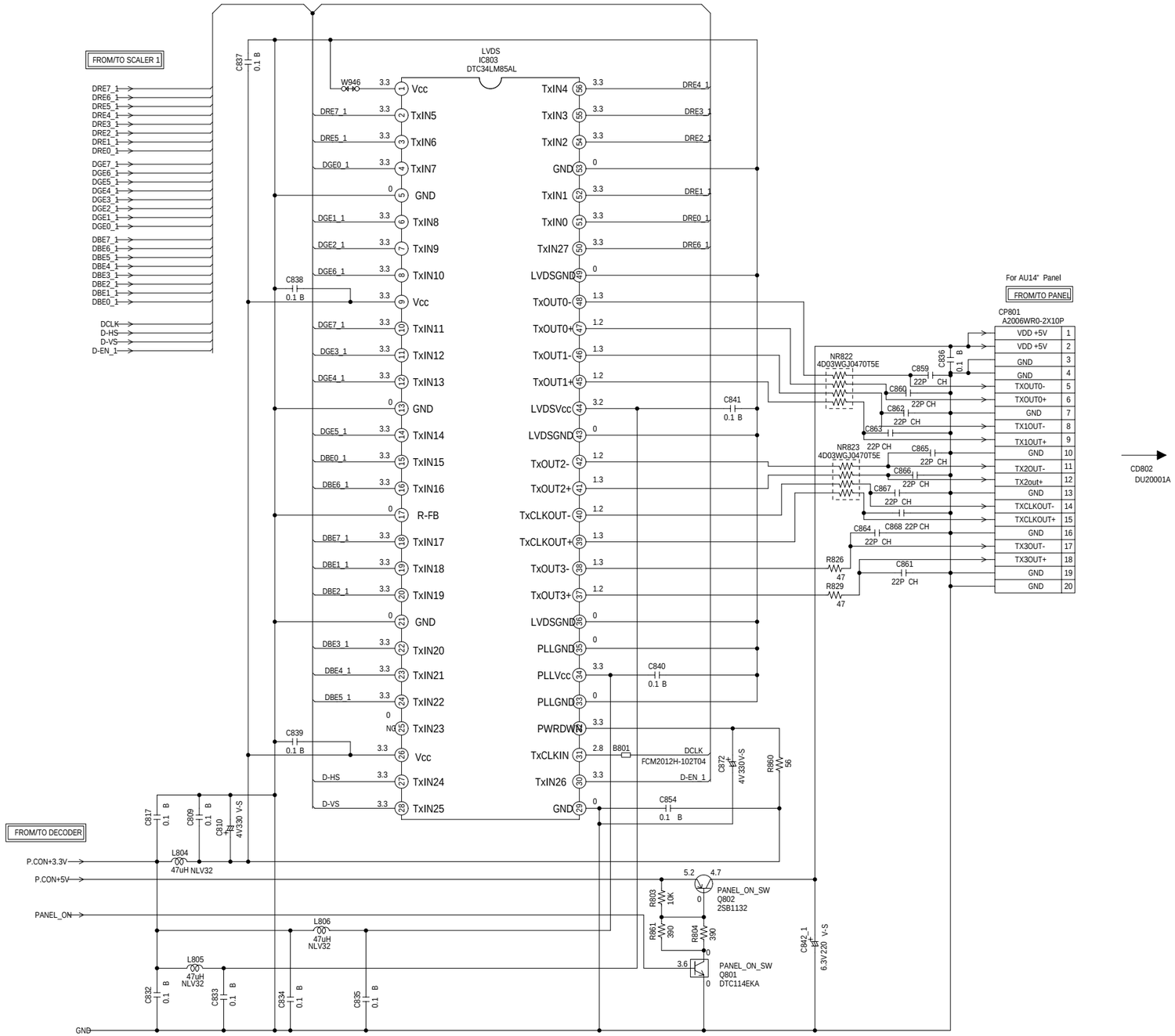
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

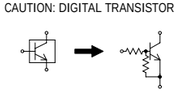
PCB340
CED006

LVDS SCHEMATIC DIAGRAM

(LCD PCB)



CAUTION: DIGITAL TRANSISTOR



NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

PCB340
CED006

MPEG/MICON/DSP SCHEMATIC DIAGRAM

(DVD PCB)

MPEG/MICON/DSP
IC4001
ZR36762PQCG_V

FROM/TO MEMORY2

FROM/TO AUDIO/VIDEO

FROM/TO RF AMP

FROM/TO MOTOR DRV

FROM/TO REGULATOR2

DIGITAL AUDIO SIGNAL(PB)

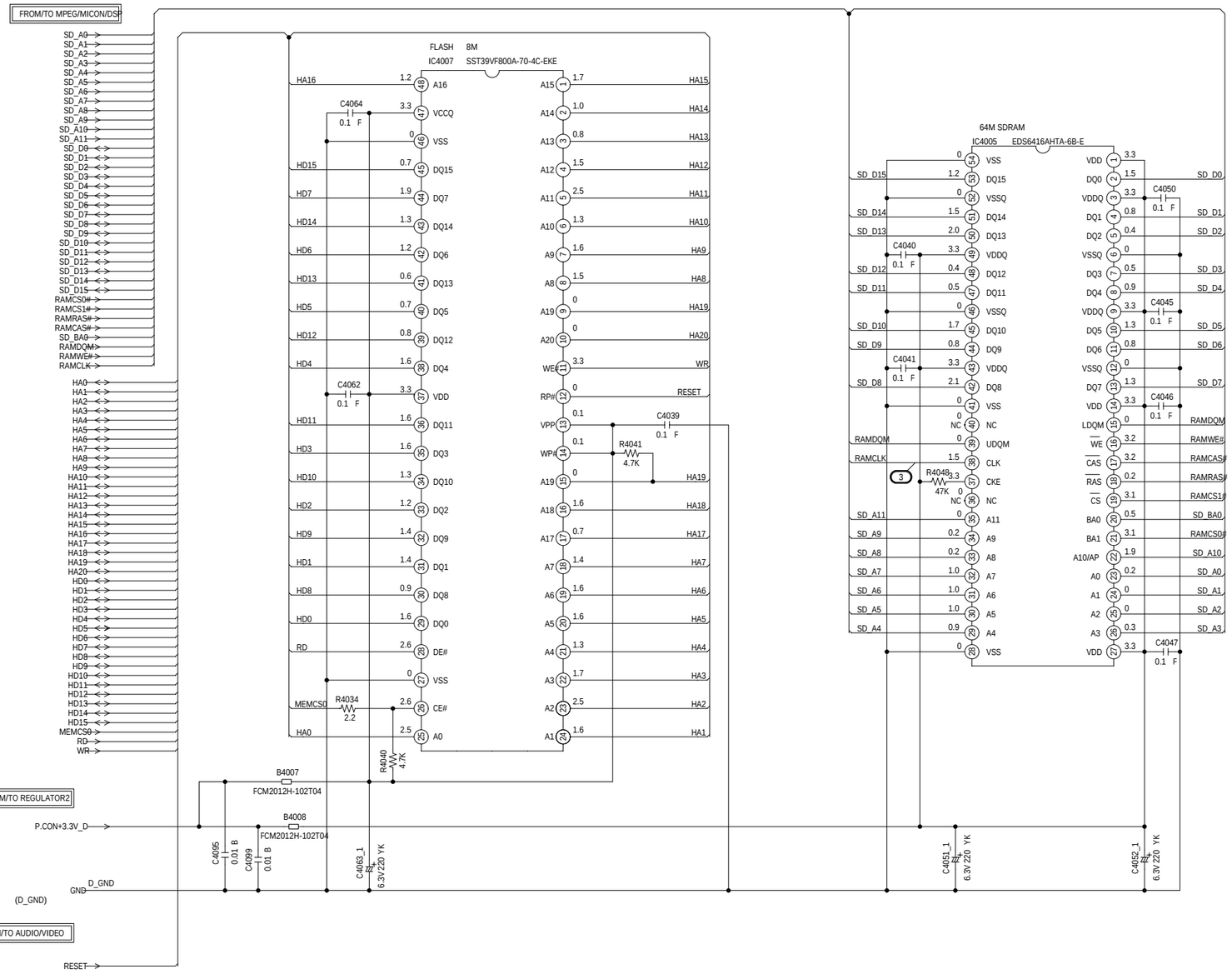
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

PCB130
DMD005

MEMORY2 SCHEMATIC DIAGRAM

(DVD PCB)



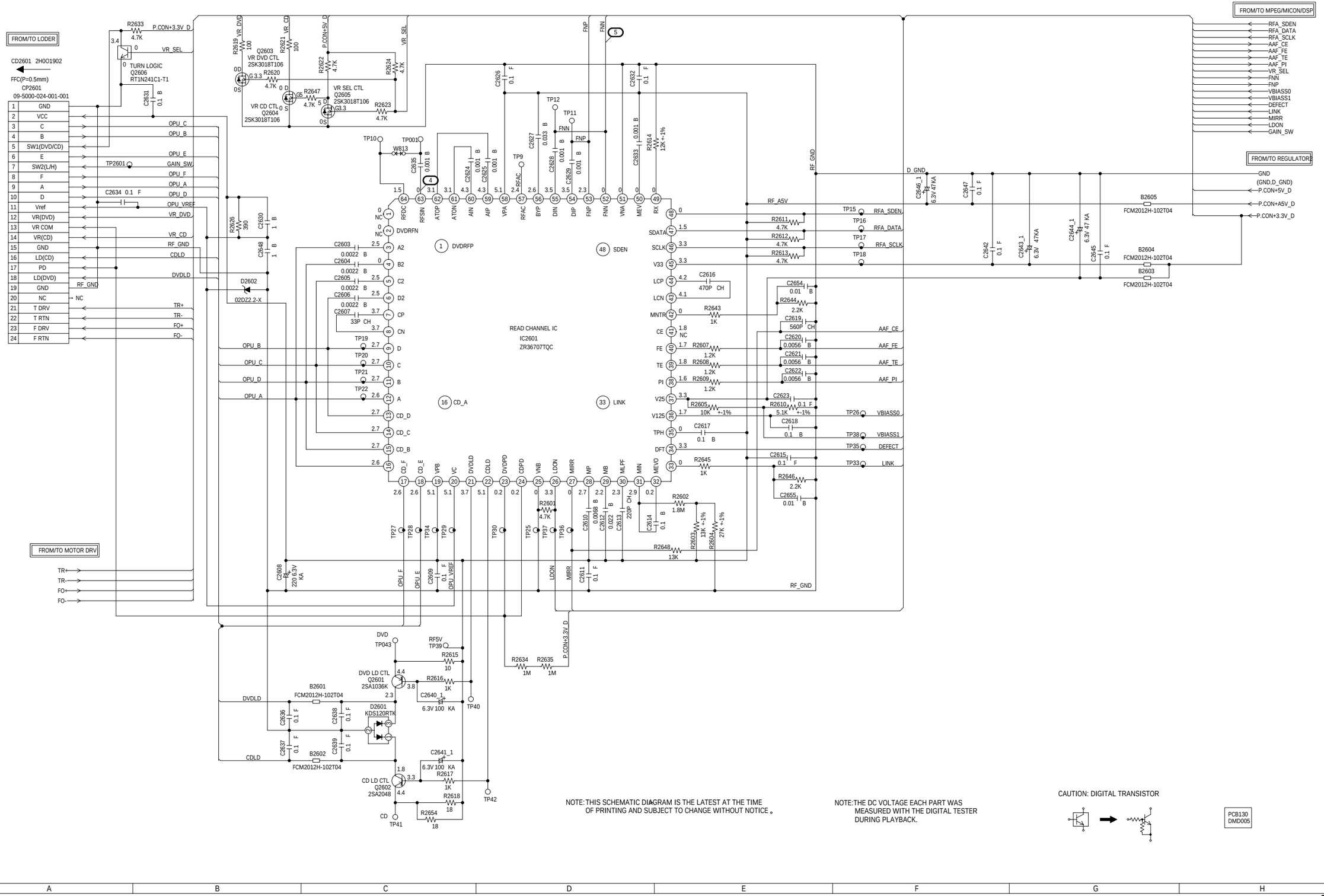
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DMD005

RF AMP SCHEMATIC DIAGRAM

(DVD PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

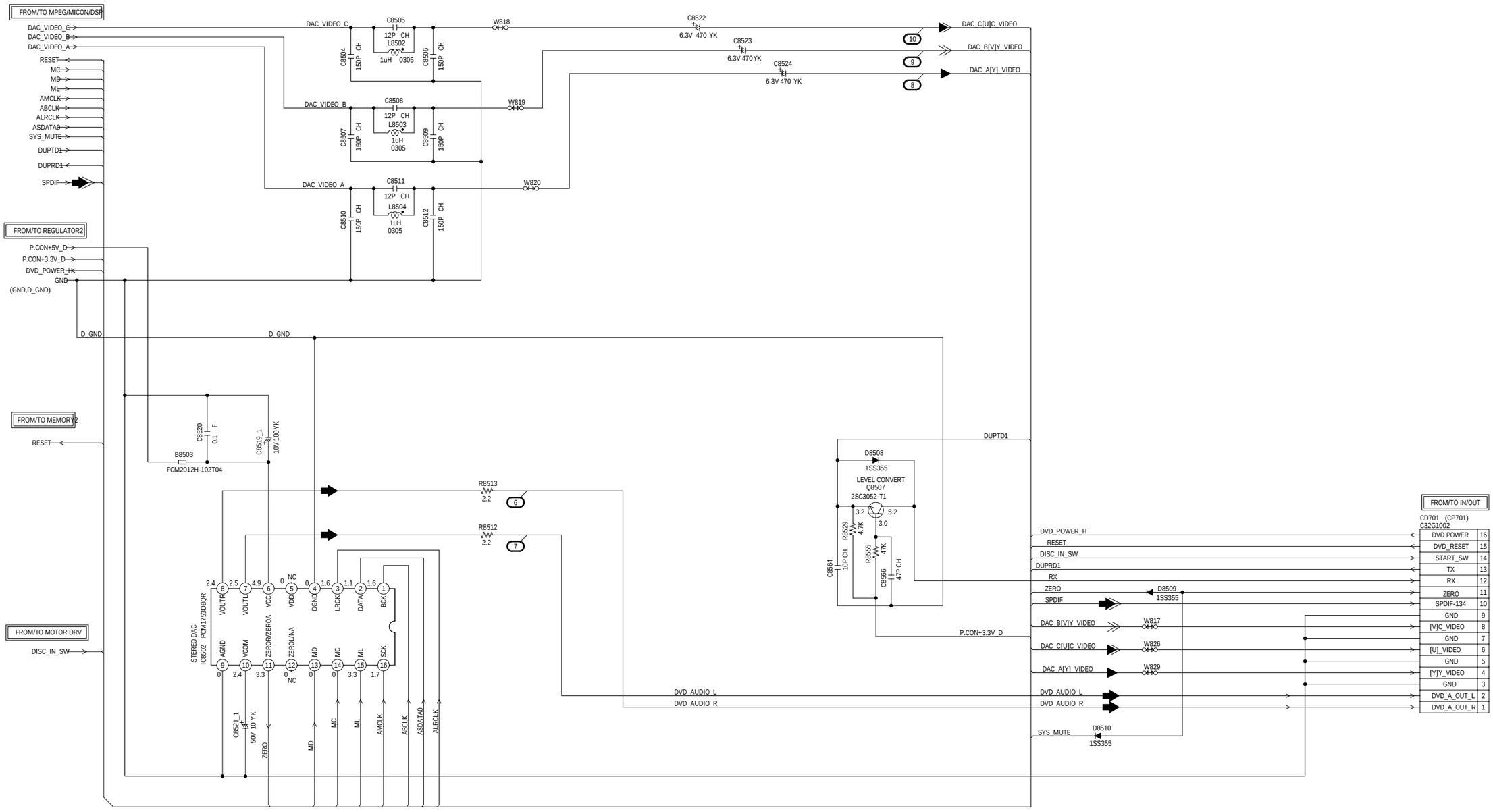
CAUTION: DIGITAL TRANSISTOR

PCB130
DMD005

AUDIO/VIDEO SCHEMATIC DIAGRAM

(DVD PCB)

	1	2	3	4
A	Y	G	CVBS	Y
B	V	R	Y	V
C	U	B	C	U
D	C	CVBS	CVBS	CVBS



◀ PLAYBACK LUMINANCE SIGNAL
◀◀ R.SIGNAL+COMPONENT SIGNAL(U)
≪ B.SIGNAL+COMPONENT SIGNAL(V)

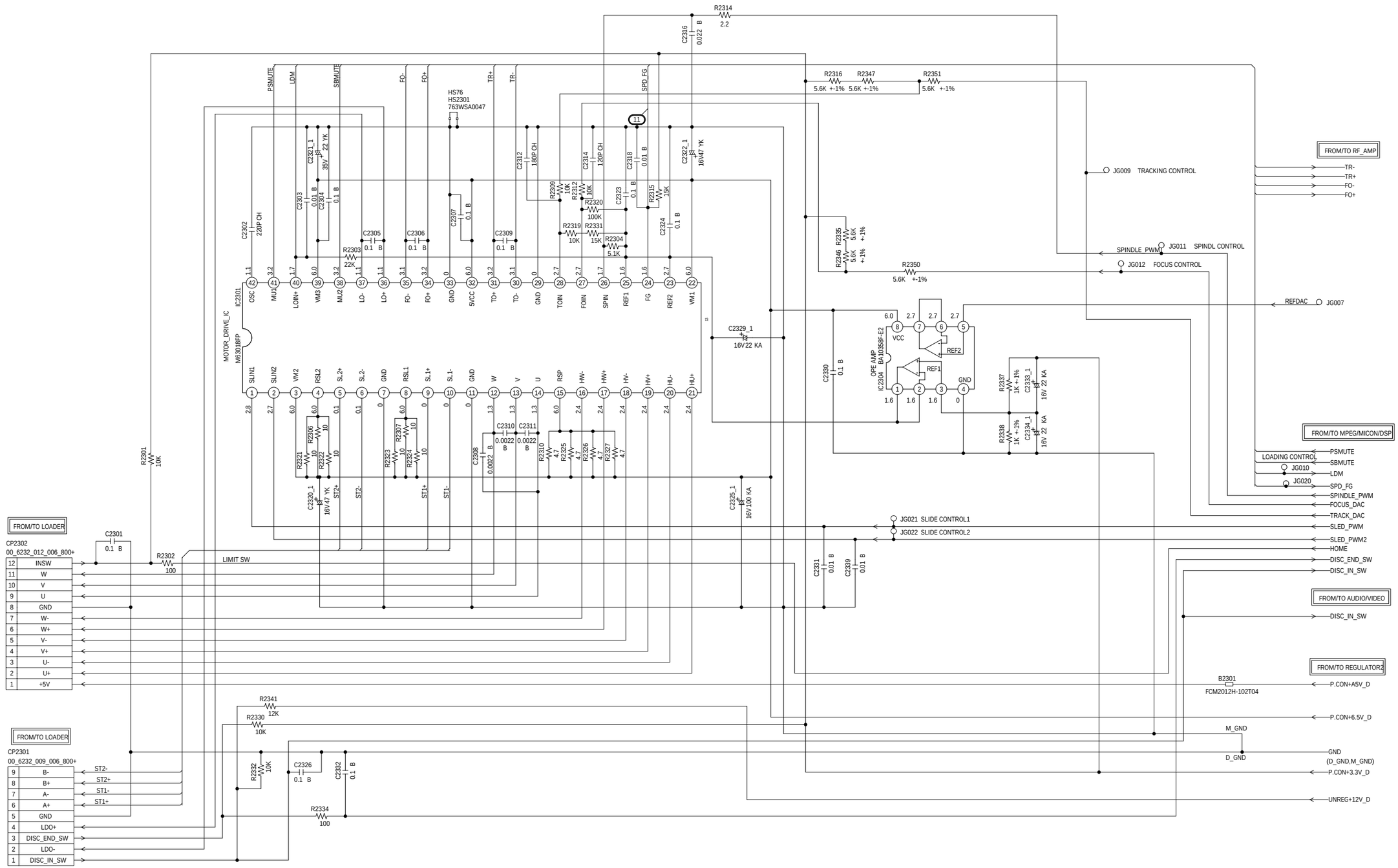
≪◀ DIGITAL AUDIO SIGNAL(PB)
◀ AUDIO SIGNAL(PB)

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

MOTOR DRIVE SCHEMATIC DIAGRAM

(DVD PCB)

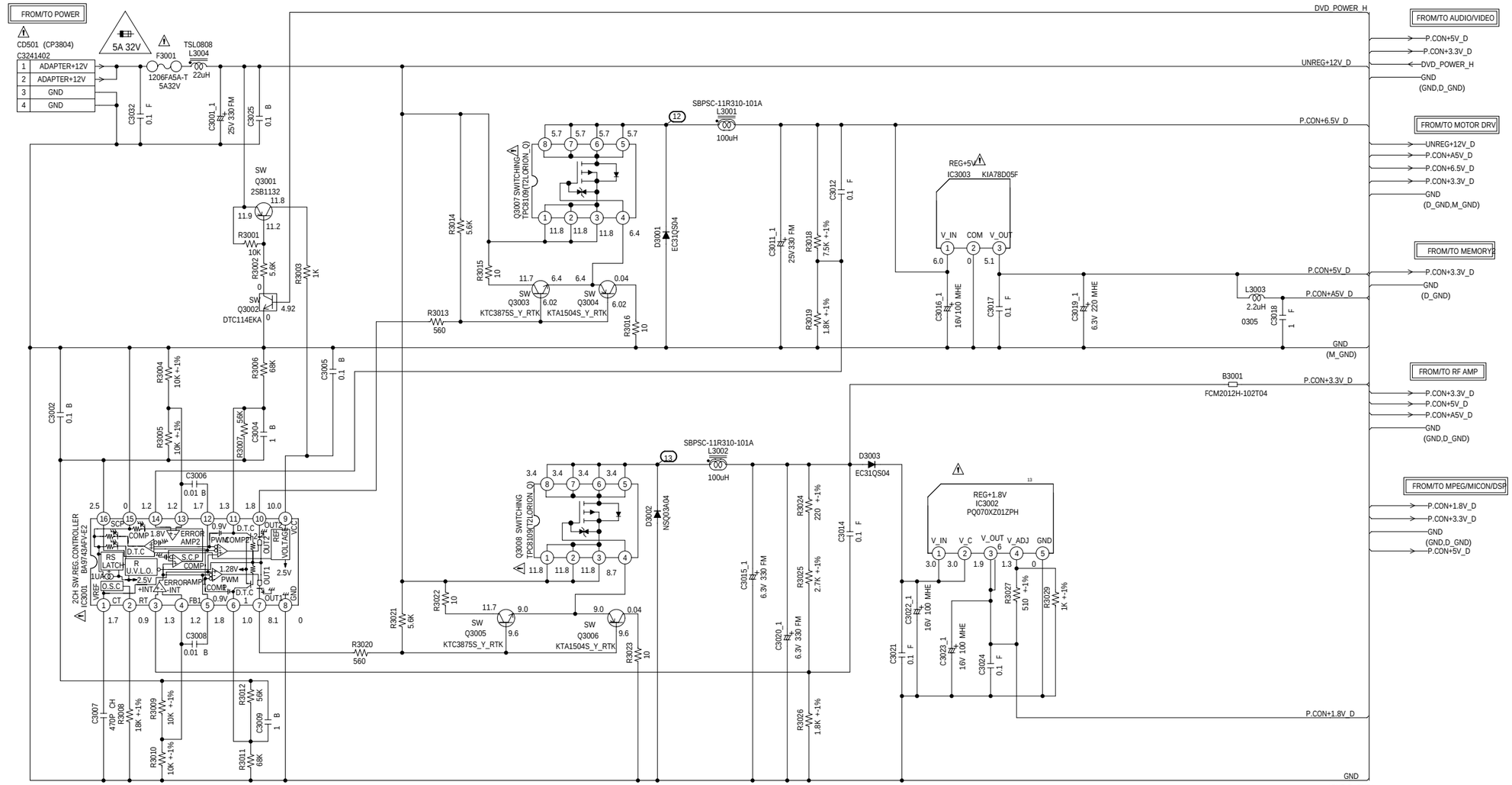


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

REGULATOR2 SCHEMATIC DIAGRAM

(DVD PCB)



5A 32V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 5A 32V (F3001)

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 5A 32V (F3001)

CAUTION: F3001 IS MANUFACTURED BY COOPER INDUSTRIES INC., TYPE 1206FA-T.

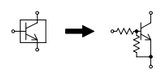
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

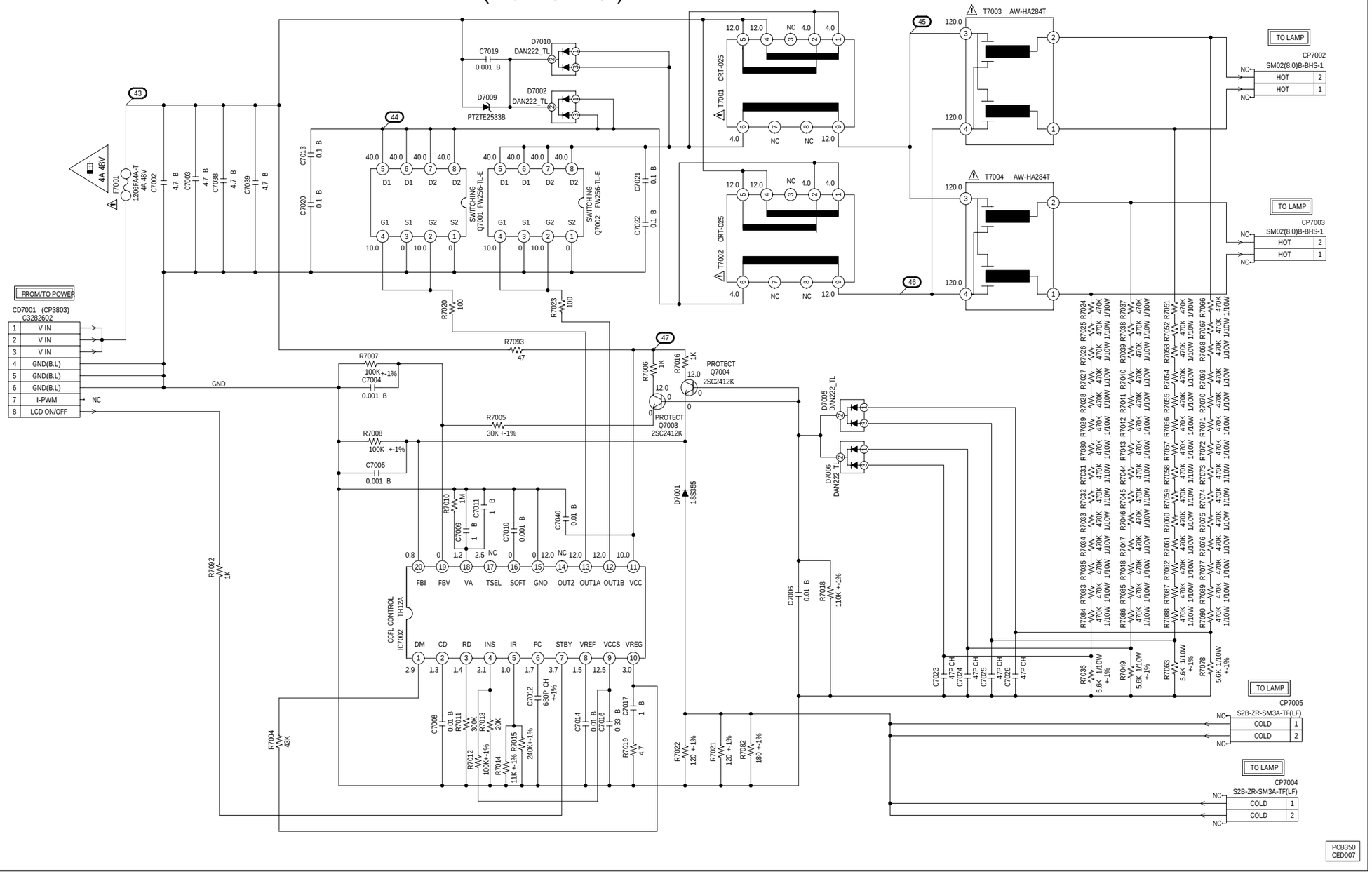
CAUTION: DIGITAL TRANSISTOR



PCB130
DMD005

INVERTER SCHEMATIC DIAGRAM

(BACK LIGHT PCB)



CAUTION: FOR CONTINUED PROTECTION AGAINST FIREHAZARD, REPLACE ONLY WITH SAME TYPE SAME RATING FUSE

4A 48V

ATTENTION: POUR LA PROTECTION CONTINUE CONTRE LE RISQUE DU FEU, REMPLACEZ SEULEMENT PAR UN FUSIBLE DU MEME TYPE DU MEME NOMINAL

CAUTION: F7001 IS MANUFACTURED BY COOPER INDUSTRIES INC., TYPE 1206FA-T.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

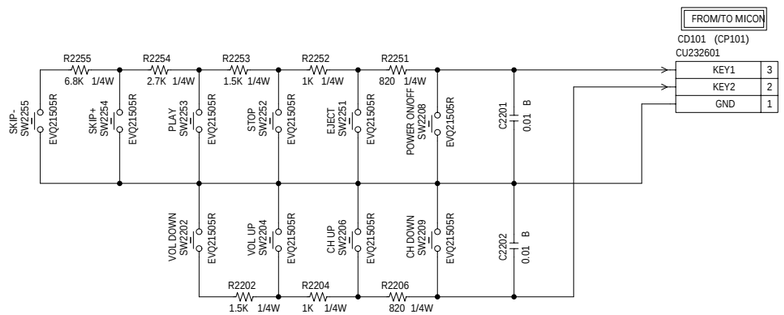
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

OPERATION SCHEMATIC DIAGRAM

(OPERATION PCB)

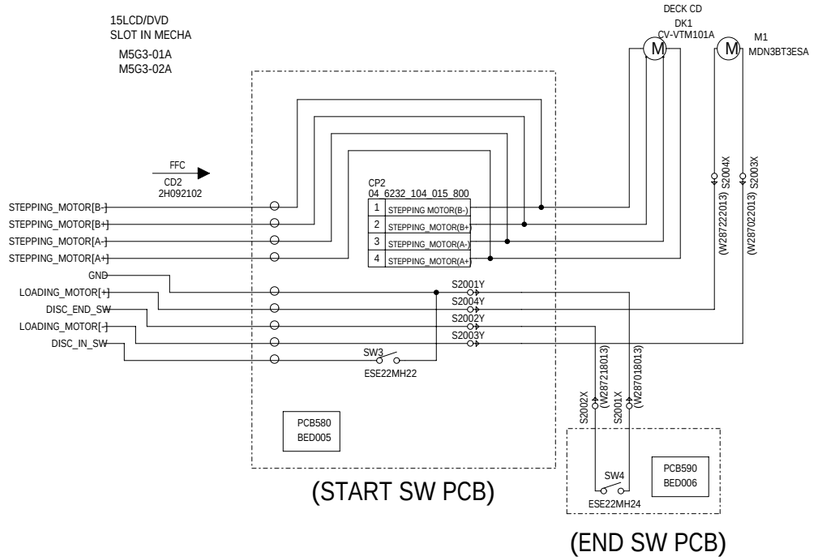


NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

PCB270
CED005

START SW/END SW SCHEMATIC DIAGRAM



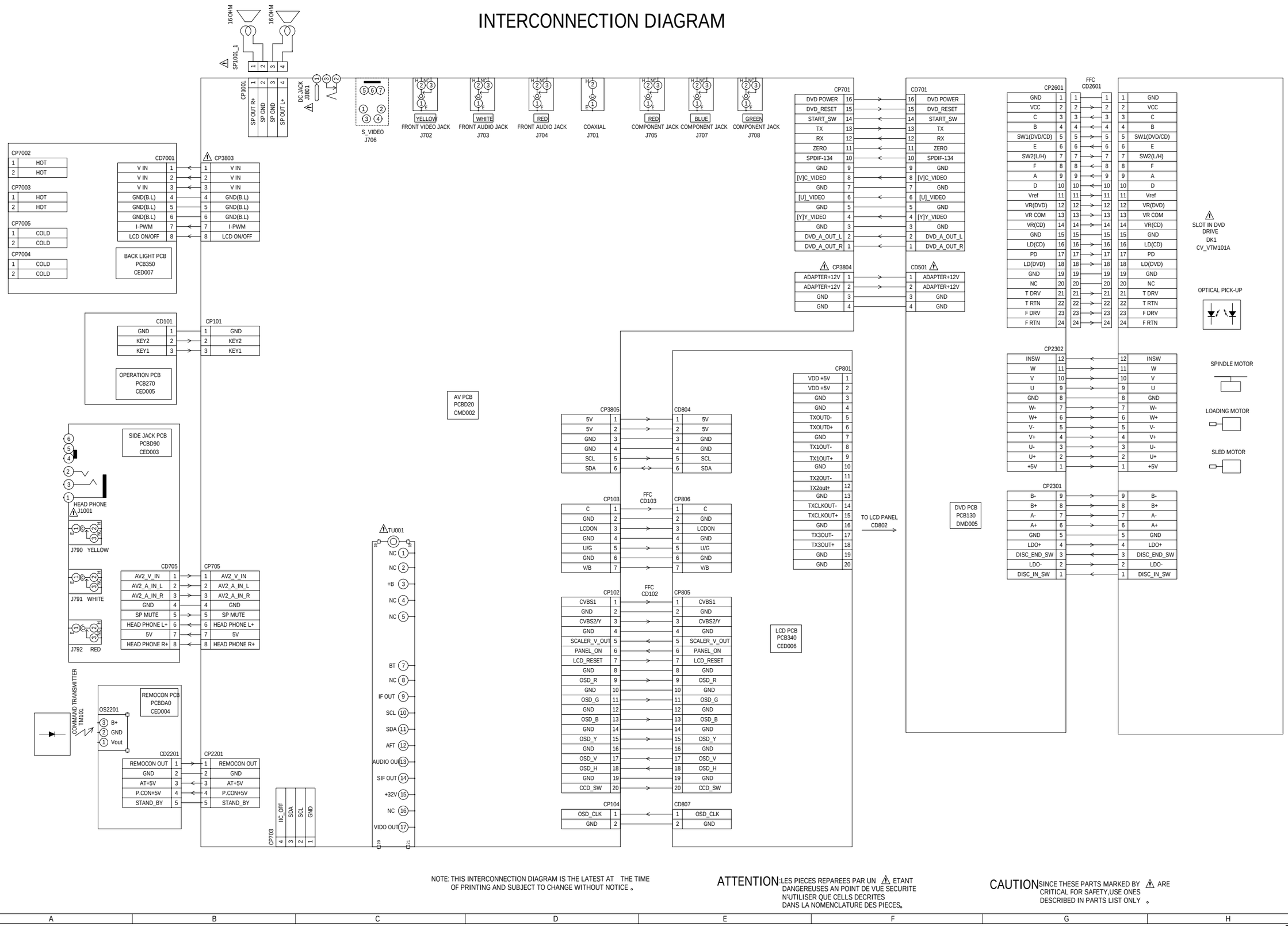
(START SW PCB)

(END SW PCB)

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

INTERCONNECTION DIAGRAM



NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

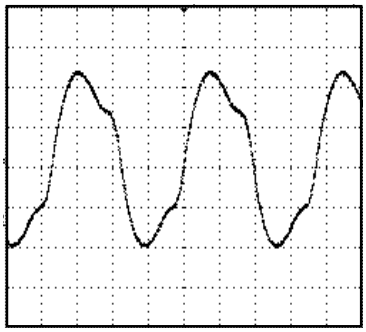
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

WAVEFORMS

MPEG/MICON/DSP

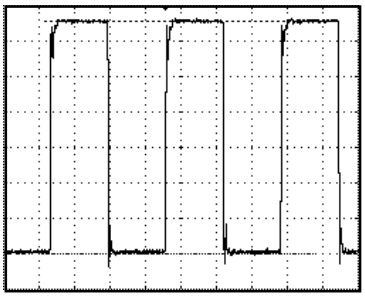
10ns
1.0V

①



200ns
500mV

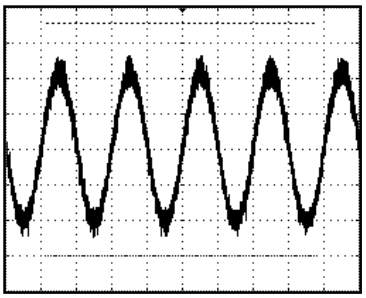
②



AUDIO/VIDEO

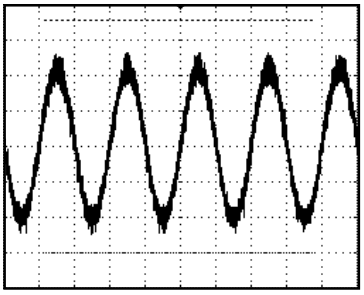
500µs
500mV

⑥



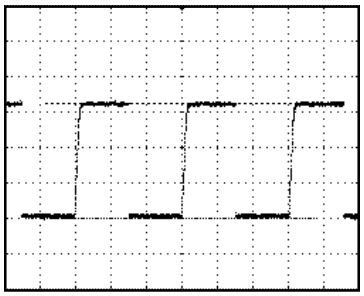
500µs
500mV

⑦



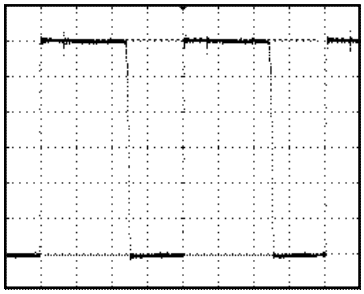
2ms
1.0V

⑪



2µs
2.0V

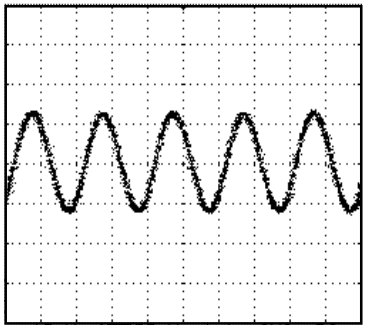
⑫



MEMORY

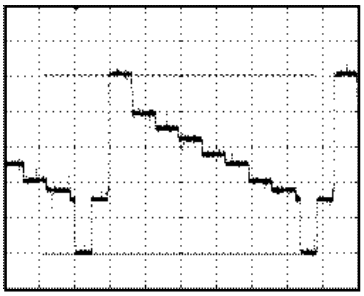
200µs
500mV

③



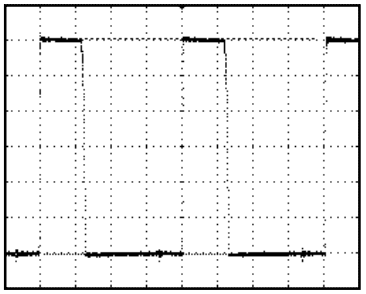
10µs
200mV

⑧



2µs
2.0V

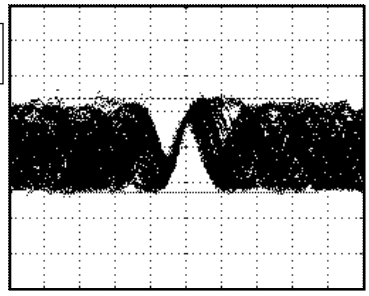
⑬



RF_AMP/DSP

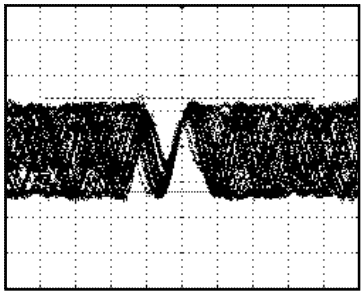
200ns
200mV

④



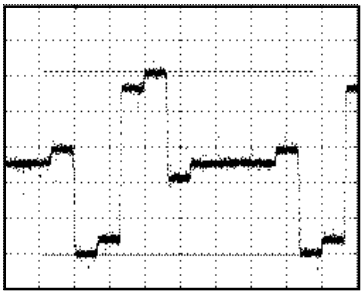
200ns
200mV

⑤



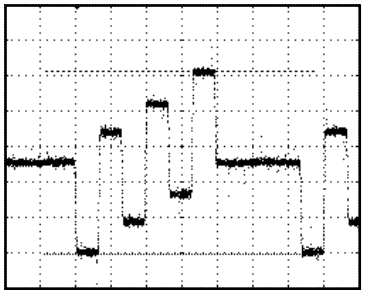
10µs
100mV

⑨



10µs
100mV

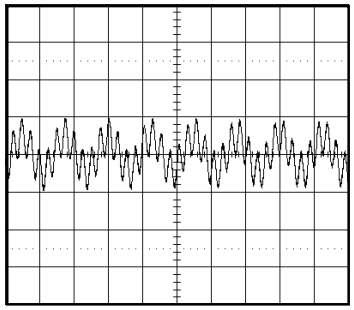
⑩



TUNER/STEREO

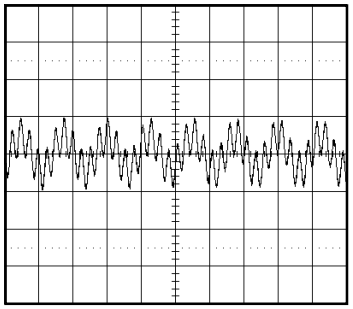
2ms
0.5V

⑭



2ms
0.5V

⑮

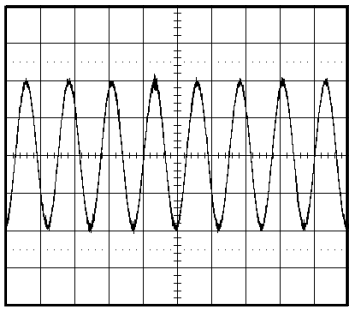


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

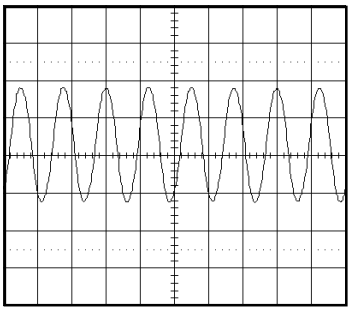
2ms
200mV

⑯



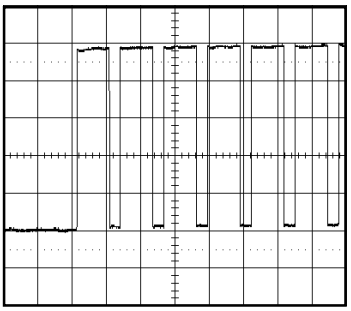
50ns
1.0V

㉑



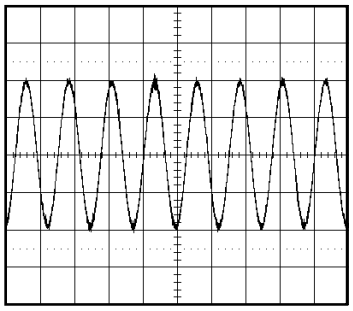
50µs
1.0V

㉖



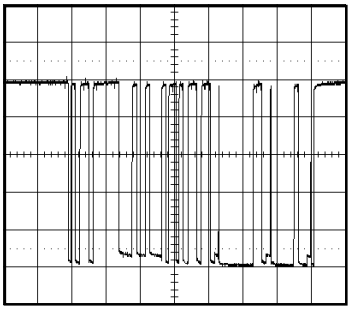
2ms
200mV

⑰



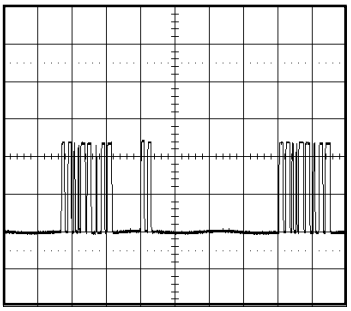
0.5ms
1.0V

㉒



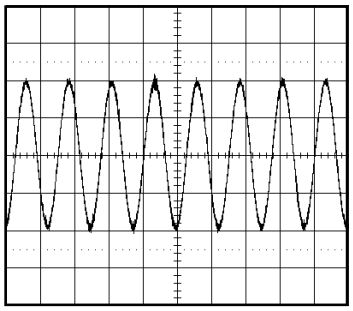
10µs
1.0V

㉗



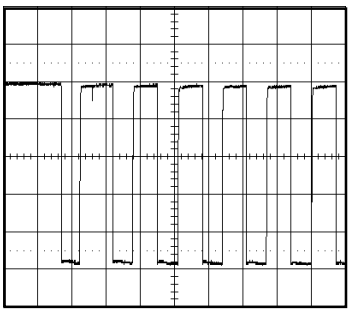
2ms
200mV

⑱



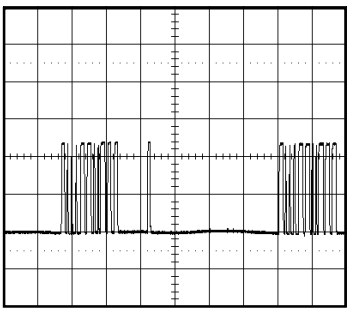
50µs
1.0V

㉓



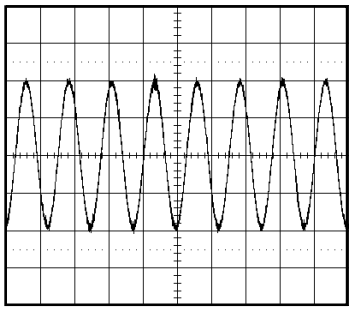
10µs
1.0V

㉘



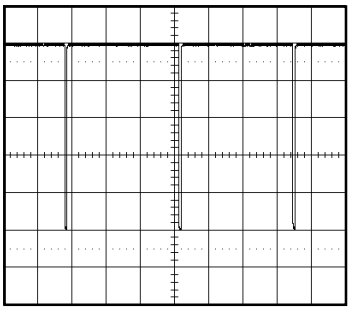
2ms
200mV

⑲



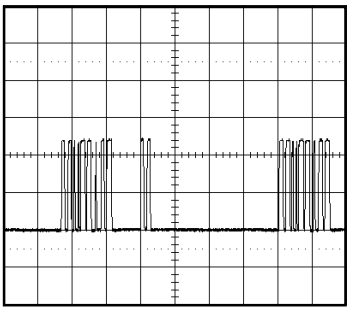
5ms
1.0V

㉔



10µs
1.0V

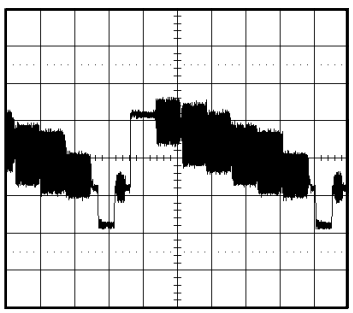
㉙



MICON

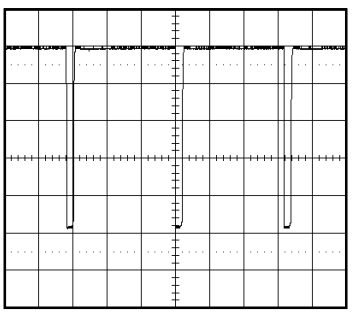
10µs
0.5V

⑳



20µs
1.0V

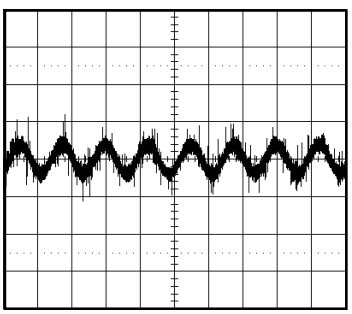
㉕



SOUND AMP

2ms
50mV

㉚



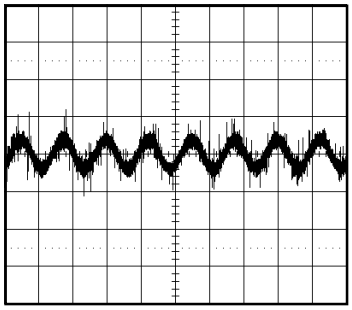
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

DECODER

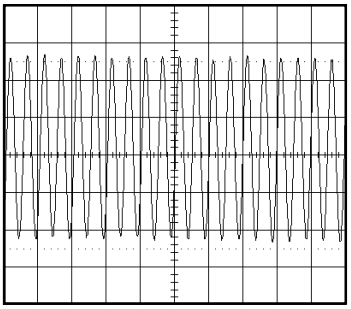
2ms
50mV

(31)



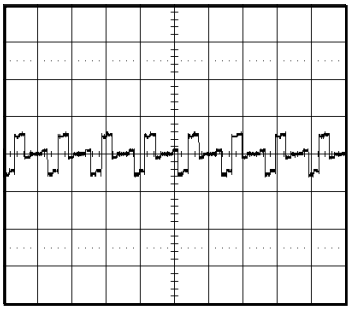
0.1µs
100mV

(36)



50µs
0.5V

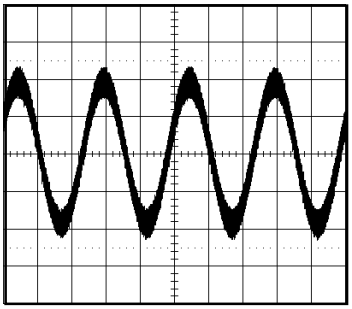
(41)



TUNER/STEREO

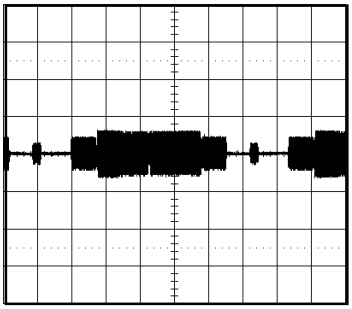
1ms
200mV

(32)



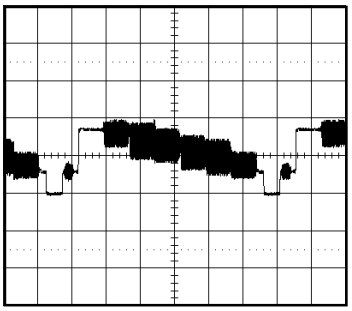
10µs
0.5V

(37)



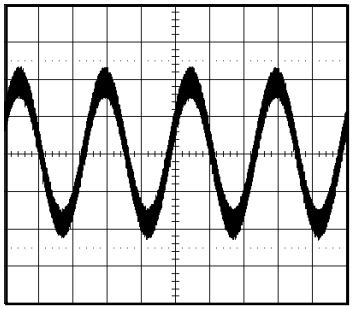
10µs
0.5V

(42)



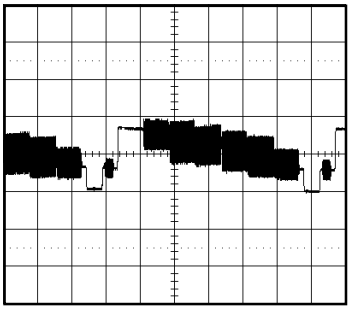
1ms
200mV

(33)



10µs
0.5V

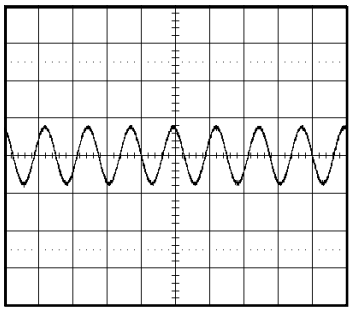
(38)



IN/OUT

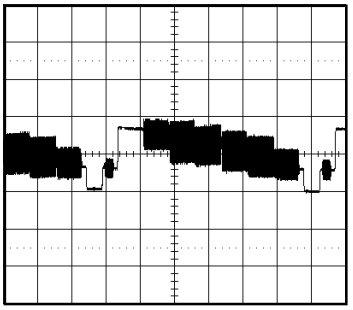
2ms
0.5V

(34)



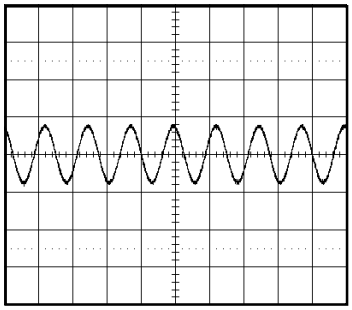
10µs
0.5V

(39)



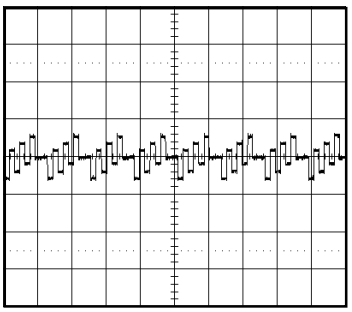
2ms
0.5V

(35)



50µs
0.5V

(40)



NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN